

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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PER ANNUM, BY POST, £1 4s.

MR. JAMES CROFTS, STOCK AND SHARE BROKER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.

Every description of British and Foreign Stocks and Shares bought and sold.
SPECIAL BUSINESS in shares not having a general market value.
SPECIAL BUSINESS in FORTESCUE (Tin), WEST TANKERVILLE, LAST CHANCE, FLAGSTAFF, TECOMA, EMMA.

Reliable advice given whether to Buy or Sell.
COLLIERY SHARES.
SPECIAL RECOMMENDATION for immediate purchase—UNITED BITUMINOUS COLLIERY. Profits for last year 20 per cent.; next year 40 per cent. expected. Shares must go to a high premium.
SPECIAL BUSINESS in CLEE HILL as Buyer or Seller, and in CARDIFF AND WANSLEY.

Business transacted in all Colliery and Iron Shares having a marketable value.

MR. W. H. BUMPUS, STOCK AND SHARE DEALER,
44, THREADNEEDLE STREET, LONDON, E.C., has FOR SALE the

following SHARES, free of commission:—
15 Asheton, £23½. 50 Emma (Silver), £33½. 10 Roman Gravel, £17½
20 All-y-Crib, 11s. 9d. 50 Eberhardt, £4½. 60 Rookhope, 22s. 6d.
50 Aberdunant. 100 Furze Hill. 100 Roca, 12s. 6d.
25 Bog, 23s. 35 Flagstaff, £23½. 40 Richmond, £6½.
50 Bwadrin Con., 17s. 6d. 20 Frontino, 7s. 6d. 50 S. Roman Gravel, 20s.
40 Birdseye Creek, £33½. 15 Great Vor, £3. 10 Sweetland, £5½.
40 Boscawell Downs. 40 Hings. Down, 36s. 20 South Roskar. £33½
25 Bampfyde, £23½. 50 Last Chance, £2. 20 South Carn Brea, £33½
3 Carn Brea, £63½. 50 Ladywell. 150 South Aurora, 14s.
100 Clee Hill Colliery, 17s. 6d. 30 Lovell (Tin), £27½. 20 Tankerville, £10½.
100 Chontales, 18s. 9d. 100 Malpas, 24s. 6d. 100 Tylwyd.
25 Cedar Creek, £23½. 25 Marke Valley, 23s. 6d. 50 Tecoma, £15½.
100 Carn Cambrone, 6s. 20 New Dolcoath, 31s. 30 Van Consols, £4.
20 Cwm Eian, 5s. 50 New Quebrada, £4. 50 West Esqair Lie, £33½.
20 Drake Walls. 150 New Pacific, 8s. 10 Wh. Grenville, £6½.
20 Don Pedro, 17s. 3d. 50 Old Batholes, 13s. 50 W. Mary Hutch., £3.
2 Dolcoath. 100 Penrithal, 20s. 3d. 150 West Maria, 7s.
50 East Van, £23½. 50 Plymington, 6s. 6d. 25 West Tankerville, £23½
5 East Lovell. 25 Pennerley, £23½. 20 Wheel Crebor, £43½.

The present depressed state of the Mining Market affords the public an opportunity of investing in this class of security with great advantage, as the shares of many sound dividend and progressive mines, now obtainable at merely nominal prices, cannot fail to increase very considerably in value during the next few months. There are, however, many worthless concerns which should be carefully avoided, and investors and others may be saved much disappointment and loss by consulting W. H. B., who is in a position to furnish reliable information and advice in the selection of mining shares of real merit.

London Office of Reference for Drake Walls and South Roskar Mines.
W. H. B. transacts business in every description of stocks and shares at the best market prices, and free of commission.
Bankers: National Provincial Bank of England, E.C.

MR. E. J. BARTLETT, STOCK AND SHARE DEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C., transacts business at net prices in every description of security.
BUYER of 100 Broadfloyd.

MR. C. POWELL, STOCK AND SHARE DEALER,
78, OLD BROAD STREET, LONDON, E.C.

MR. JOHN RISLEY (SWORN), STOCK AND SHARE BROKER,
77, CORNHILL, LONDON, E.C.
Specially recommends the purchase of shares in WHEEL CREBOR, TRELEIGH WOOD, and WHEEL GRENVILLE MINES.
The latest reports of the above mines forwarded on application.
Brokerage on Buying or Selling shares of £4 and upwards, 1½ per cent., and 1s. per share on each under £4.

MESSRS. A. ENDEAN, FISHER AND CO., STOCK AND SHARE DEALERS,
32, NEW BROAD STREET, E.C.
Business transacted in all marketable Securities for cash or account.
Messrs. E. F., and Co. advise the purchase of shares in Bampfyde, Boscawell Downs, Brynna, and Woodhouse and Polgoth.
Bankers: London and Westminster, Lothbury.

MR. WILLIAM WARD
(Late WARD AND LITTLEWOOD).
CROSBY HOUSE, 95, BISHOPSGATE STREET WITHIN, E.C.
DEALS IN ALL KINDS OF STOCKS AND SHARES, for cash or to the account.

MESSRS. BLYTH AND HUTCHINSON,
STOCK AND SHARE BROKERS,
3, GEORGE YARD, LOMBARD STREET, LONDON, E.C.
Every information respecting Railways, British and Foreign Stocks, Mines, &c., will be furnished free by post or on application.
Price-List daily.
Bankers: Alliance Bank.

MR. HENRY MANSELL, STOCK AND SHARE DEALER,
14, GREAT WINCHESTER STREET, LONDON, E.C.
H. M. recommends the purchase of COLORADO TERRIBLE shares.

MESSRS. W. A. CARR AND CO.,
STOCK AND SHARE BROKERS,
8, WARFORD COURT, THROGMORTON STREET, E.C.
Consols, Foreign Stocks, Railways, Mining Shares, and every Security quoted in the London Stock Exchange or Mining Market Bought and Sold.
Speculative accounts opened for the fortnightly settlement.
Scale of Commissions on application.

W. S. TIPSON, GRECIAN CHAMBERS, DEVEREUX COURT, TEMPLE BAR, STOCK AND SHARE DEALER.
Shares for sale in all the principal English, Foreign, and Miscellaneous Securities. Advances made on shares pending sale.
Bankers: London and County.

MESSRS. WM. MARLBOROUGH AND CO.,
29, BISHOPSGATE STREET WITHIN, LONDON, E.C. (Established 18 years), have FOR SALE the following SHARES at prices annexed:—
25 Asheton, £33½. 30 Emma, £33½. 30 Rookhope, 23s.
25 Aberdunant. 25 East Basset, £13½. 50 So. Rom. Gravel, 15s.
50 All-y-Crib, 10s. 3d. 25 Flagstaff, £23½. 35 South Aurora, 14s. 3d.
25 Almada, 12s. 9d. 20 Great Vor, £2 17s. 6d. 30 South Great Work.
50 Boscawell Downs. 50 Great West Van. 10 Sweetland, £5½.
50 Blue Tent, £43½. 50 Gold Run, 4s. 9d. 20 S. Carn Brea, £33½.
30 Bog, 21s. 9d. 20 Hobb's Hill. 20 S. Condurow, £4 17s.
25 Bampfyde. 15 Hingston Down, 37s. 3d. 1 South Caradon, £93½.
15 Bayse, par. 25 Herodsfoot, £47½. 50 So. Tolcarne, 13s. 6d.
3 Carn Brea, £63½. 25 Kingston, £53½. 3 Tincroft, £40½.
20 Chicago. 30 Lovell. 50 Last Chance, £1 16s. 9d.
40 Chontales, 18s. 20 Ladywell. 15 Tankerville, £10 6s. 3d.
5 Cook's Kitchen, £11½. 40 Tecoma, 25s. 9d.
15 Clee Hill Coll., 17s. 6d. 20 New Dolcoath, 31s. 3d.
25 Catherine & Jane, 25s. 20 New Rosario. 35 United Bituminous
20 Cedar Creek, £23½. 25 Newfoundland. 25 Nangiles, offer wntd.
5 Cape Crebor, £23 7s. 6d. 20 North Pool, 20s. 9d.
20 Cwm Eian, 5s. 25 Pennerley, 38s. 3d. 15 Wheel Crebor, £4 3 9
3 Dolcoath, £49½. 75 Perkins Beach, 10s. 25 Wh. Grenville, £6½.
15 Dyliffe, £7. 50 Penrithal, 20s. 3d. 25 West Esqair Lie, £33½
20 East Chiverton, 25s. 25 Prince of Wales, 6s. 6d. 25 West Tankerville, £23½
20 Eberhardt, £4 9s. 25 Penderley, £23½. 20 W. Tankerville, £23½
20 E. Llangynog, £2 10s. 6d. 20 Richmond, £3 16s. 3d.

MR. GEORGE BUDGE, STOCK AND SHARE DEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 23 years), is a SELLER at net prices of:—
100 Penrithal (ex. div.); 35 Wheel Crebor; 60 Wheel Argus, 26s. 6d.; 75 Prince of Wales, 5s.; 200 West Caradon, 2s. 6d.; 100 Burrow and Butson, 9s. 9d.; 50 Old Treburget, 14s.; 25 West Gwennap, £43½; 65 Fortescue; 20 Wheel Grenville, £6½; 30 Devon Great Consols; 60 Aberdunant, 6s. 9d.; 60 Plymington, 6s. 3d.; 30 East Van, £2 19s. 6d.; 35 Van, £23½; 5 Llanmoron 37s. 6d.; 3 Dolcoath, £50½; 70 West Esqair Lie, £3 1s. 9d.; 110 Hobb's Hill; 120 Cwm Eian, 5s. 9d.; 70 West Gwennap, 34s.; 50 Englefield (fully paid), £6; 100 United Bituminous; 45 Blue Hills, 32s. 6d.; 35 Ladywell; 20 Roman Gravel; 20 Great Laxey, £14; 50 Wheel Crebor; 50 Cedar Creek, £23½; 200 Gold Run, 4s. 9d.; 100 Last Chance; 40 Emma, £33½; 130 Frontino and Bolivia, 8s.; 100 Rossa Grande, 10s.; 20 Mammoth Copperopolis, £43½; 300 York Peninsular, 4s.; 50 Tecoma, 25s. 9d.; 25 Flagstaff, £23½; 60 Birdseye Creek; 20 Newfoundland; 250 Exchequer, 15s. 9d.; 50 Wina-much; 150 Richmond; 20 Chicago (fully paid), £6.
SPECIAL BUSINESS in colliery and iron shares.

WEEKLY MINING CIRCULAR, EVERY FRIDAY.
LONDON DAILY RECORD, STOCK & SHARE LIST, Every Evening.

Published by P. WATSON, Stock and Share Dealer, 79, Old Broad-street, E.C.
Bankers: The Alliance Bank, and Union Bank of London.

MR. T. E. W. THOMAS, SWORN SHARE BROKER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.
Established 1857.

Mr. THOMAS, at considerable expense, has established a trustworthy agency in Salt Lake City, and is in constant communication, by letter and cable, concerning the mines of that district, which is at the service of his clients.
Latest information concerning Flagstaff, Last Chance, Tecoma, Utah, Chicago, and other mines.

IMPORTANT TO SHAREHOLDERS IN ALL PUBLIC COMPANIES.
WHAT TO SELECT—WHAT TO AVOID.
BY FREDK. WM. MANSELL.

ENGLISH AND FOREIGN STOCK AND SHARE DEALER,
PINNERS HALL, OLD BROAD STREET, LONDON, E.C.

The DECEMBER number (now ready) contains a Comprehensive Review of the Position and Prospects of the General Investment and Mining Markets, &c., which should be read by all shareholders and others interested in such matters. It also contains many valuable hints to speculators.
* * * Differing in every respect from all monthly Circulars, it embodies a large amount of valuable information, and well deserves being filed for future reference.
—Vide London press.

Gratis to clients. Subscription 1s. per copy, or 10s. 6d. per annum.
Established 1857. Bankers: London Joint-Stock Bank.

MR. E. CHARTERS, 8, CRAIG'S COURT, CHARING CROSS,
LONDON, has the FOLLOWING SHARES, free of commission:—

50 Almada, 12s. 9d. 20 Gwanton, £1. 20 Roman Gravel, £17½
50 Australian, £2. 20 Great Vor, £23½. 15 Richmond, £6½.
50 Belstone, 33s. 6d. 35 Hingston, £13½. 40 So. Carn Brea, £33½.
50 Bellavista, £27½. 50 Herodsfoot, £47½. 20 St. Dennis Consols, £2
35 Bog, £13½. 50 Last Chance, £13½. 20 Sweetland, £5.
10 Chicago, £7½. 10 Lovell, £47½. 20 Tankerville, £9½.
30 Castle Gate, 18s. 30 Ladywell, £33½. 15 Tincroft, £39.
5 Cape Copper, £27. 40 Marke Valley, 15s. 9d. 30 Tecoma, £15½.
10 Cook's Kitchen, £11. 70 New Dolcoath, £2. 25 Van Consols, £23½.
10 Clee Hill Colliery, 16s. 60 New Quebrada, £33½. 25 Wheel Crebor, £43½.
10 Dolcoath, £49. 30 Pennerley, £2. 20 Wheel Tregoss, £1.
20 Emma, £3. 30 Plymington, 7s. 6d. 10 Wh. Grenville, £6½.
10 Flagstaff, £3. 35 Providence, £7. 10 Wheel Uny, £23½.
120 Florence, £23½. 35 Penhalls, £23½. 10 Wheel Mary.
50 Frank Mills, 4s. 9d. 60 Parys Mount, (s. 3d.) 10 Wheel Kitty, £10½.
20 Franco Consols, 23s. 75 Prince of Wales, 6s. 6d. 10 Wheel Basset, £7½.
100 Frontino, 5s. 9d. 80 Rossa Grande, 4s. 9d. 100 Yudanumutana, 6s. 6d.

WHEAL MARY continues to improve, and shares ought to be at once secured for a great rise in price.

INVESTORS IN ENGLISH AND FOREIGN BONDS,
Railways, Bank Shares, Mines, should consult
THE "INVESTMENT REVIEW,"
Independent, Fearless, and Exhaustive.

By JOHN R. PIKE, STOCK AND SHARE DEALER,
CROWN CHAMBERS, THREADNEEDLE STREET, LONDON.
Post free, Threepence.

MR. JOHN MOSS, STOCK AND SHARE DEALER,
ST. MICHAEL'S CHAMBERS, 42, CORNHILL, E.C., LONDON, has business in all British and Foreign Mines, and is prepared to lend money on any marketable Stocks or Shares at moderate rates of interest. Shares sold for delivery three, four, or six months hence on receipt of cover of 20 per cent.
For SALE, free of commission:—

100 Asheton, £33½. 100 Perkins Beach, 10s. 50 Birdseye, £33½.
100 Aberdunant, 15s. 3d. 60 Prince of Wales, 5s. 50 Blue Tent, £5½.
50 Bampfyde, £33½. 10 Providence, £7½. 50 Cedar Creek, £23½.
30 Bog, £13½. 20 Roman Grav., £17. 50 Chicago, £5.
2 Carn Brea, £62. 20 So. Condurow, £13½. 100 Colorado, £43½.
5 Cook's Kitchen, £11½. 20 S. Rom. Gravel, 21s. 100 Don Pedro, 21s.
50 Devon Gr. Cons., £23½. 15 Tankerville, £10. 20 Eberhardt, £47½.
25 East Basset, £13. 10 Van, £34. 20 Emma, £33½.
25 East Caradon, £13½. 50 Van Consols, £4. 100 Flagstaff, £33½.
25 East Lovell, £10½. 10 West Basset, £8½. 100 Last Chance, £15½.
25 East Van, £23½. 50 West Caradon, 2s. 6d. 100 Newfoundland, £5.
10 Great Laxey, £13½. 15 West Chiverton, £5½. 20 New Quebrada, £33½.
20 Great Wh. Vor, £3. 25 West Esqair Lie, £33½. 40 Richmond Con., £68 9
50 Hingston Down, £17½. 45 W. Tankerville, £23½. 35 Sweetland Creek, £5½
25 Ladywell, £33½. 50 Wheel Crebor, £43½. 150 Tecoma, £1 8s. 9d.
25 Penrithal, £1. 20 Wh. Mary Ann, £2. 40 Wheel Grenville, £6½.
40 Wheel Uny, £23½. 40 Wheel Grenville, £6½.

J. M. is a BUYER of the above at a small reduction from the quoted price.
Latest and most reliable information concerning the above may be obtained on application.
Bankers: City Bank, Finch-lane, E.C.

MESSRS. J. TAYLOR AND CO., of 86, LONDON WALL, E.C.
(date of 3, Union-court, Old Broad-street); and
MINING EXCHANGE, SOUTH KING STREET, MANCHESTER.

FOR SALE,—50 Hobb's Hill (fully paid), 10s.; 60 Aberdunant, 7s. 6d.; 5 Van Consols.
WANTED,—South Condurow shares. Sellers state lowest price.

F. FERDINAND R. KIRK, STOCK BROKER,
5, BIRCHIN LANE, E.C., INVITES OFFERS FOR—

23 Cardiff and Swansea. 5 Nant-y-Glo. 75 United Bituminous.
61 Clee Hill. 25 Native Iron Ore. 10 Vancouver Coal.
15 Darlington Iron. 17 Silstone Fall. 15 Wedgwood Iron.
10 Marbella Iron. 12 South Cleveland. 10 Welsh Freehold.

Bankers: London and Westminster, and City Bank.

MR. JAMES HUME, STOCK AND SHARE BROKER,
1, ST. SWITHIN'S LANE, LONDON, E.C.

Business transacted for the fortnightly account in Consols, Foreign Bonds, Railways, Banks, and other Shares.
The best advice given in regard to Mining Shares, and the same bought, sold, or exchanged.
N.B.—As the prices of shares advertised at fixed prices are universally admitted to be delusive, and as changes are occurring daily and hourly, a List of Prices is sent free on application.

MR. JAMES STOCKER, STOCK AND SHARE DEALER,
2, CROWN COURT, THREADNEEDLE STREET.

Railway, Mining, and Miscellaneous Shares bought and sold at the best market prices. SPECIAL BUSINESS in the following:—

20 All-y-Crib. 55 Fortescue, 10s. 30 Rookhope, 23s.
20 Almada. 25 Great West Van, 40s. 25 Richmond, £6 13s. 9d.
20 Aberdunant. 20 Great Vor, £3. 250 Rossa Grande, 7s. 6d.
20 Bampfyde, £2 12s. 6d. 100 Gold Run, 5s. 3d. 40 Ruby (210 paid), 45s.
20 Bedford United, 15s. 6d. 20 Great Laxey, £33½. 40 Sierra Butte, 25s.
45 Birdseye, £33½. 20 Great Laxey, £33½. 60 S. Roman Grav., 20s.
50 Biscan Caelan. 35 Hingston, 38s. 9d. 25 So. Condurow.
100 Bellavista, 12s. 9d. 20 Hudson's Bay. 50 South Aurora, 13s. 6d.
10 Bellavista, offer wntd. 25 L. X. L. 35 So. Carn Brea, £33 9
50 Bog, 24s. 6d. 25 Ladywell, £23½. 5 S. S. S. Moor, offer w.
45 Blue Tent, £43½. 25 Last Chance, 37s. 6d. 30 Sweetland, £5½.
2 Carn Brea, £62½. 10 Lovell (Tin), £3. 100 Thornhill Reef, 34s.
30 Colorado, £4 8s. 60 Malabar, 13s. 100 Tecoma, 31s. 3d.
30 Chicago (ET paid). 75 Malpas, 22s. 75 Tylwyd.
30 Chontales, £10 paid. 60 Marke Valley, 21s. 25 Tankerville.
50 Cwm Eian, 5s. 60 Mam. Copperopolis. 20 Treleigh Wood, £12.
10 Cook's Kitchen, £12. 100 New Roseworne, 7s. 6d. 45 Unity Wood.
20 Cedar Creek, 42s. 6d. 45 New Quebrada. 70 Van Consols, £3 19s.
30 Caldecott Fellis. 25 Newfoundland, £6½. 30 W. Tankerville, £2 10s.
60 Clee Hill Coll., 16s. 3d. 85 New Rosario. 100 West Caradon.
3 Dolcoath, £49½. 50 Old Batholes, 15s. 10 W. Chiverton, £5½.
5 East Basset. 50 Old Treburget, 12s. 60 W. Milver Silver, 11s.
40 East Grenville, 9s. 60 Ditto Preference. 20 West Pant-y-Go, 5s. 6d.
10 East Lovell, £11½. 10 Providence, £8½. 30 W. Esqair Lie, £3.
30 East Llangynog. 60 Parys Mountain. 70 West Stiperstones, 9s.
15 East Van, £2 11s. 70 Perkins Beach, 11s. 6d. 10 Wh. Mary Ann, 42s.
45 East Seton, 5s. 6d. 60 Pennerley, 38s. 6d. 25 Wheel Crebor, £43½.
25 Eberhardt, £4 10s. 100 Penrithal, 20s. 30 W. Wh. Grenville, £43½.
30 Emma, £33½. 75 Prince of Wales, 5s. 15 Wheel Grenville.
60 Exchequer, 15s. 6d. 60 Roca, 12s. 9d. 5 Wh. Margaret, £23½.
40 Flagstaff, £3. 45 Rosewall Hill, 10s. 6d. 20 Wheel Uny.

Bankers: London and Westminster.

MR. CHARLES THOMAS,
MINING AGENT,
3, GREAT ST. HELEN'S, LONDON, E.C.

MESSRS. A. W. THOMAS AND CO.,
10, COLEMAN STREET, E.C.

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FOR SALE—50 Fortescue Tin shares, at 9s. per share.

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Emma.	West Wheel Gwanton.	Malpas.
Flagstaff.	Gold Run.	Buller.
Kitty (St. Agnes).	Pacific.	Roca.
Cedar Creek.	Malabar.	West Esqair Lie.

Parties wishing to purchase or sell in the foregoing are requested to make application. PENNINGTON AND CO., SWORN BROKERS.

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MESSRS. PENNINGTON AND CO.'S "MONTHLY RECORD OF INVESTMENTS," containing an exhaustive Review of the British and Foreign Stock and Share and Money Markets, &c., with an enumeration of safe investments, paying from 10 to 20 per cent. Price 6d. per copy, or 5s. annually. PENNINGTON AND CO., 3, Royal Exchange-buildings, E.C.

MESSRS. W. DUNN AND CO., STOCK AND SHARE DEALERS, 3 AND 4, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.

Orders received and commissions executed.
Bankers: National Provincial Bank of England.

W. D. and Co. have FOR SALE the following at net prices:—
38 Aberdunant, 4s. 6d. 10 Lovell, £2 17s. 6d. 5 Tankerville, £10.
50 All-y-Crib, 12s. 30 New Dolcoath. 25 Tecoma, £1 5s.
25 Bampfyde, £2 12s. 6d. 3 North Roskar, £4. 5 West Chiverton, £5.
50 Clee Hill Coll., 15s. 6d. 10 Pennerley, £2. 30 W. Godolphin, £2 12s. 6d.
20 East Chiverton. 50 Penrithal, £1. 10 Wheel Crebor, £4 12s. 6d.
20 Emma, £3 2s. 6d. 10 Richmond Con., £6½. 10 Wh. Grenville, £3 10s.
25 Flagstaff, £3 5s. 20 Rosewall Hill, 18s. 6d. 5 Wh. Margaret, £2 17s. 6d.
50 Gt. West Van, £2. 10 So. Carn Brea, £3 7s. 6d. 5 Wheel Kitty (St. Ag.), £2 2s. 6d.
40 Grogwinion, £3. 40 South Merilyn, 10s. 49 2s. 6d.
25 Last Chance, £1 15s. 35 S. Roman Grav., 1s. 15 Wheel Uny, £2 10s.

MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS, 85, GRACECHURCH STREET, LONDON, E.C.

McKENNA & CO., STOCK AND SHARE BROKERS,
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JOHN B. REYNOLDS, STOCK AND SHARE DEALER,
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Has LARGE LOTS of MINING SECURITIES FOR SALE. Full particulars on application. The present is a better time for buying mines than we have had for many years past, particularly as so many of the uninitiated are eager sellers.

BARTLETT AND CHAPMAN, 36, CORNHILL, LONDON,
STOCK AND SHARE DEALERS.

Before investing, read our publications:—
"Handy Book for Investors" (third edition), price 10s. 6d.
"British Mines and Mining," price 2s. 6d.
"Investors' Directory," price 1s. 6d.
The "Investment and Financial Record," will be sent FREE on application.
Bankers: London and Westminster.

MR. THOMAS THOMPSON, JUN., 1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.
Some valuable hints as to the purchase of mining shares will be found in Mr. Thompson's "Investment Circular" for December now ready, post free, price 6d.

MAUDSLAY AND CO., STOCK AND SHARE BROKERS,
3, CRAVEN STREET, STRAND, LONDON, AND ST. AUSTELL, CORNWALL, transact business in all Stocks, Shares, and Miscellaneous Securities, at close market prices.

MAUDSLAY AND CO., having a branch establishment in the heart of Cornwall, can furnish the earliest information of discoveries in mines, enabling their clients to anticipate the rise in price of shares.
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BUSINESS TRANSACTIONS in every description of STOCKS and SHARES, according to the Rules of the Stock Exchange.
Address, "H. H." MINING JOURNAL OFFICE, 26, Fleet-street, London.

STOCKS AND SHARES OF EVERY DESCRIPTION BOUGHT AND SOLD BY MESSRS. H. HALFORD AND CO., of 27, LOMBARD STREET, E.C.
MELINDUR VALLEY LEAD MINING COMPANY shares are strongly recommended. Price is now ¾ prem., and will be double this price in a few weeks.
GLYNGWILLIM COLLIERY COMPANY's shares at 2½, and no further liability; are a first-class investment. Every information will be afforded on application.

MESSRS. PARKYN AND CO., ST. AUSTELL, CORNWALL,
would advise immediate PURCHASE in NEW FOWEY, EAST ST. DENNIS, &c.

PARKYN and Co. have DEBENTURE BONDS FOR SALE bearing 10 per cent. interest, paid half-yearly: these are safe, and should be secured, they having bought £280 themselves, and have only a few to dispose of.
SEVERAL GOOD HEMATITE IRON MINES TO DISPOSE OF.
Thirty Years' experience.
Bankers: South Cornwall Bank, St. Austell.

MR. J. HODGE, having had thirty-five years' PRACTICAL MINING, offers his ADVICE to CAPITALISTS, INTENDING PURCHASERS, or SELLERS.
16, ALBERT ROAD, PLYMOUTH.

MR. R. PERCY ROBERTS,
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MR. H. R. MARSDEN, SOHO FOUNDRY, LEEDS,
Only maker in the United Kingdom.

MR. JOHN CARTER, MINE SHARE DEALER,
CAMBORNE CORNWALL, transacts business in every description of shares at close market prices of the day.
Prices appear to have reached their lowest, and good shares are now worthy of attention.

THE ANGLO-BOLIVIAN SILVER MINING
COMPANY (LIMITED).

Registered under the Companies Acts, 1862 and 1867.
Capital £100,000, in 20,000 shares of £5 each.
Deposit 10s. per share on application, and £1 on allotment. The balance, if required, to be called up: £1 10s. in three months, and £1 at Six and Nine Months respectively.
Shareholders will have the option of paying up their shares in full, and upon which they will receive Seven and a half per cent. But it is expected that no calls will be requisite.

DIRECTORS.

JOSEPH ALLEN, Esq., St. Mark's Square, West Hackney.
FRANCIS ELLIS, Belle Vue Road, Tooting.
CONSTANT MERTENS, Esq., Shipping and Insurance Agent,
Walbrook House, Walbrook, E.C.
G. J. MILLER, Esq., Clapham Rise, S.W.
JOHN HONEYWOOD TERRY, Esq., Boscobel Gardens, Regent's
Park.

BANKERS.

IMPERIAL BANK, Lothbury, London, and its Branches.

Messrs. KIMBER and LEE, 1 and 2, Great Winchester street Buildings, E.C.
RESIDENT MINING ENGINEER AT CARACOLAS.
WILLIAM BRAY, Esq.
AUDITORS.
Messrs. LOVELOCK and H. W. WHIFFIN, 19, Coleman-street, E.C.
SECRETARY.
THOMAS SPARGO, Esq.
OFFICES.
224 and 225, GRESHAM HOUSE, OLD BROAD STREET, E.C.

PROSPECTUS.

This company has been formed for the purpose of purchasing and working of silver mines in the Cochabamba district of Caracoles, situated in the southern part of the Republic of Bolivia, in South America, at a distance of only 120 miles from the Pacific Coast in a direct line, but between 120 and 150 miles, according to the roads at present used.

"The Times," in its City Article, May 21st, 1873, says:—

"With regard to the silver mines of Caracoles, in the Republic of Bolivia, the following statement appears in the Valparaíso journal 'El Mercurio del Vapor' of the 2nd ult. The correspondent by whom it is transmitted remarks:—'The facts reported may be of interest to show that Bolivia is once more commencing to peep into the world an amount of silver worthy of her old reputation, when she gave to Peru her fame as the greatest silver-producing country known.'

The news from Caracoles is good, judging from positive results. According to a correspondent, the quantity of ore deposited in the warehouse of the Descabezado Mines in a fortnight is not less than 900 quintals per day, with an average standard of nearly 75 marks per box, or 64 quintals, each of 100 lbs. This ore belongs almost entirely to the lots got out in February.

The ore delivered from the other mines in the same region has amounted, during the fortnight, to 8000 quintals, with an average standard of nearly 190 marks per ton, or 81 marks, each of 120 lbs. weight, for various purchasing houses.

The quantity of ore now on hand at the different deposits at Antofagasta exceeds 40,000 quintals. In the course of the present month there will be four Strain steamers coming to embark ores, and an extra one, it is said, chartered by Messrs. Dorado and Volckmar, will take 27,000 quintals.

The ore is at present conveyed to the coast in carts, but a railway is in course of construction from the excellent port of Megillones to Caracoles, under contract between Messrs. Watson and Meigs, of Valparaiso, and the Bolivian Government, and on its completion, which it is expected will take place within two years from this date, the present cost of carriage will be materially reduced, and the value of the mines as a consequence enormously increased. Another railway is also being constructed from Antofagasta.

The Descubridora or Discoverer's Mines, situated in this district, were discovered less than three years ago, and are giving extraordinary results. The statistics published in the "Caracolino," of the 25th February, shows the yield in January last amounted to 82,114 marks (of 8 ozs.), or about £165,000 (£131,382 at 4s. per oz.), whilst the "South Pacific Times," of the 28th March, shows the total yield of the principal mines at Caracoles, including the Descubridora, in December, was 142,796 marks, or at the rate of about £3,500,000 per annum.

ANALYSIS OF THE SILVER ORE SPECIMENS FROM THE DISTRICT.
Brought over official to England by CAPTAIN WILLIAM BRAY,
Engineer in Chief to this Company.

"Laboratory and Assay Office, 25, Finsbury-place, E.C., Aug. 12

"Certificate of assays of fifteen samples of silver ore, marked 'Bolivia',
forwarded by Capt. William Bray:—

		ozs.	dwt.	grs.
No. 2, silver	Per ton	2,613	6	18
No. 4, "	"	7,023	6	16
No. 7, "	"	4,739	5	17
No. 10, "	"	3,755	14	15
No. 13, "	"	6,533	6	15
No. 19, "	"	718	13	8
No. 19, gossan, silver	"	289	10	0
No. 9, " "	"	331	1	3
No. 22, Argenterifera galena—Lead, 47.5 per cent.; Silver	"	2,229	13	6
No. 9, " "	"	7,164	12	8
Average of 15 specimens, as above	"	3,969	0	0
No. 8, silver	"	4,156	16	16
No. 18, "	"	4,753	0	0
No. 20, "	"	18,309	13	8
Second assay, No. 20	"	20,330	0	0
This is the average of two assays—Gossan from No. 20; silver	"	7,301	0	0

W. T. RICE, F.C.S., Assayer and Consulting Chemist."

Subjoined is a descriptive district report given by Capt. Bray, and may be relied on as authentic and reliable documentary evidence of the "Descriptive of the Country and its Resources." And here it will be well to premise that the recent social improvements, the Governmental reforms and political relations which have been established in the State of Bolivia, and have augmented the value of her public securities in England and on the Continent, ensure every adequate protection to capital invested in this country, labour at the same time being at a cheap standard as readily available.

The following are particulars of five mines secured by the company, and placed under the charge of Captain William Bray, a highly respectable English mining engineer, resident at Copiapo Chile:—

THE "PRUSIANA" MINE.—The lode shows itself throughout the entire sett, with about 20 inches, angle 40° east. In this mine there are two places in which work is being carried on: the first, at the north part of the sett, has been proved to depth of about 8 fathoms, and is 1 foot in width. Two samples of ore, taken from different places of the lode, produced on an average 49 ozs. to the ton.

The south lode is 10 to 15 ft. deep at several points, and is 10 to 15 ft. wide at about 10 ft. depth at 15 stations, an east lode being driven about the distance of 100 ft. The depth of the lode generally contains a good percentage of silver, and occasionally stones of a superior quality, in proof of which one sample gave 990 ozs. to the ton, and another sample 70 ozs., the average of the lode deepest point, and the average of four assays at distinct parts of the lode 290 ozs. to the ton.

Several lodes cross this set, one of them being the famous lode of the "Six Mine," celebrated for the superior quality and abundance of its ores, and when

"LA PAZ" MINE.—The lode in this mine has been sunk on to a depth of 11 fms. and is about the same about 1 foot, with an angle of 20° east; an assay made produced 45 ozs. of silver to the ton. There are several lodes which cross this set, and which will be productive as the mine gets opened up.

"ELVIRA" MINE.—The mine is situated in a valley called "Quebrada Fresca," distant from the town of Potosí about 70 fms. The lode runs about 52° west, with an angle of 2 ft., composed of spar and lead, the country being of the same for producing silver; the depth gained is about 4 fms. vertical; at a little more than 2 fms. the lode is heaved by a manto, and has been cut below that, thus requiring a short cross-cut, and when taken will contain a good percentage for silver.

"CANDELARIA" MINE.—This mine is situated about 140 yards from the public road towards the north east part of the sett there is a stratum or manto on which it has been driven for about 13 fms., producing for the greater part of this distance good stones of silver ore; an assay of one sample gave a percentage of 14.80 to the ton. This end or cross cut, by continuing, would intersect two well-known lodes within a few fathoms. Throughout the sett there are a great many lodes which cross in different directions, at the intersections of which large deposits are invariably met with.

road of the valley called Quebrada Honda; the lode runs about 10° east, and from the surface to a depth of about 5 fms. vertical, judging from the extent of ground opened, the ore must have been of a good quality, some of the refuse at surface having given 80 ozs. to the ton.

"**MINTNA**" MINE.—This mine is situated by the side of and parallel with the Candelaria Mine; width of lode about 32 in., depth gained about 5 fms. vertical; lode well defined, composed of spar, iron, and lead, an assay of which gave 64 ozs. of silver to the ton.

As the ores are spalled and picked by hand, and no pumping has yet been required, been found necessary in any of the mines worked at Caracoles, no costly machinery will be required.

Applications for shares to be made on the forms accompanying the prospectus, and sent with a deposit of 10s. per share to the bankers, directors, brokers, solicitors, or secretary of the company.

The agreement for the sale of the property is made between William Bray, of

HORIZONTAL ENGINES, of most approved construction, from

8 to 60 in. cylinder, for WINDING AND GENERAL PURPOSES.
Some good secondhand HORIZONTAL ENGINES ON SALE, single and in
pairs, from 14 inches to 20 inches cylinders, suitable for winding, &c. **GOOD**
BOILERS of all sizes.
CREASE AND CO., 39, CONGREVE STREET, BIRMINGHAM.

2000

THE PANT-Y-MWYN LEAD MINING COMPANY
(LIMITED).

Incorporated under the Companies Acts, 1862 and 1867.
Capital £50,000, in 30,000 shares of £2 each,
Of which 5000 are appropriated as hereinafter mentioned.
Payments—10s. per share on application; £1 on allotment. The remainder
to be paid in calls as required.
There are already 31 shareholders in the immediate neighbourhood of the mines
holding 755 shares, and applications are still being made in the district.
Applications for the remaining shares to be made to the secretary, as under.

DIRECTORS.
JAMES CHANT, Esq., 3, Westminster Chambers, Victoria-street,
London, S.W.
JOHN WRIGHT, Esq., Haydon-villa, Broad-green, near Liverpool.
JAMES YELLAND, Esq., Pontesbury, Salop.
THOMAS DAWSON, Esq., Necropolis, Liverpool.
RICHARD WATERS, Esq., The Llan, Church Stoke, Montgomery-
shire.
(With power to add to their number.)

BANKERS.
THE NORTH AND SOUTH WALES BANK, James street, Liverpool, and Mold.
SOLICITOR.
SAMUEL PEELING BRABNER, Esq., 40, North John-street, Liverpool.
AUDITOR.
GEORGE EDWARD HOLT, Esq., Union court, Castle-street, Liverpool.
SECRETARY.
EDWARD ROBERTS, Esq., Commerce-court, 13, Lord-street, Liverpool.
MANAGER.
Captain WILLIAM WATLEY, Vronheulog, near Mold.

This company is formed for the purpose of working an extensive and valuable
mineral property, extending over an area of about 1500 acres, advantageously
situated in the parishes of Gwernaffield and Cilcen, within 2½ miles of the town
of Mold, in the county of Flint, and is surrounded by some of the richest mines in
the Principality. The sets are held under leases for the usual term of 21 years at
the rate of 10s. per acre, and an agreement has been entered into under which the
lessors of these properties, together with all wharfs, buildings, &c., on the land are
acquired in consideration of an allotment of 5000 fully paid-up shares, and £500 in
cash. In the "Modion" sett, a winze now being sunk in the bottom of the adit
level is now worth 3 tons of ore per fathom, and going down in new ground.
See agents report in "Mining Correspondence."

WHEAL BARNARD SILVER, TIN, AND COPPER
MINING COMPANY
(LIMITED).

Capital £25,000, in 25,000 shares of £1 each.
Fully paid-up. No further liability.
BANKERS—WEST OF ENGLAND BANK, Tavistock.
SOLICITOR—H. LUXTON, Esq., Tavistock.
SECRETARY—MR. THOS. J. BARNARD, 4, Abbey Mount, Tavistock.

ABRIDGED PROSPECTUS.

This valuable property is replete with extensive machinery, including a power-
ful 26 in. rotary engine, with all attachments, 300 ft. pumps fixed to the bottom
of the copper and tin shaft, 12 heads stamps, calcining furnaces, buildings, amal-
gamation mill, and all the necessary tools and materials for the purpose of working
the mines. The sets are held under leases for the usual term of 21 years at
the rate of 10s. per acre, and an agreement has been entered into under which the
lessors of these properties, together with all wharfs, buildings, &c., on the land are
acquired in consideration of an allotment of 5000 fully paid-up shares, and £500 in
cash. In the "Modion" sett, a winze now being sunk in the bottom of the adit
level is now worth 3 tons of ore per fathom, and going down in new ground.
See agents report in "Mining Correspondence."

A powerful crusher is being attached to the engine, and precipitation works laid
out on an extended scale. The tin and copper lodes average 20 to 35 per cent.
arsenic, 2 to 3 per cent. copper, 20 to 40 lbs. tin, and 8 to 12 ounce silver per ton
of stuff, and treated by Mr. Barnard's process will result in great profits.
The leases, machinery, and plant, and the whole of the property, will be
sold, as per Articles of Association, for 17,500 fully paid-up shares, and £5000 in
cash, the company to pay all expenses of working the mine since it was started,
February 25th, 1873, including preliminary expenses, registration fees, &c., and
receive the money for all minerals sold since that date, and become the possessors
of the ores and minerals already raised to surface. The buildings and plant alone
could not be replaced for £5000, and the proprietors agree to replace 12,500 of the
17,500 free shares to an amount to be called "commission account," to be offered
and presented to those who first come forward in assisting with capital to develop
the property.

The first general meeting of the shareholders will take place at the count house,
upon the mine, on Wednesday, December 17th, 1873, at Three P.M., when directors
will be elected from the general body of shareholders, a favourable opportunity
will thus be presented for visiting the property, as it is confidently expected that
a month before that date the works will be in full operation, and by the day of the
meeting everything in regular working order, with handsome profits being derived
from the scientific treatment of a combination of minerals already discovered.
Prospectuses and forms of application for shares can be obtained of either the
Secretary, Bankers, or Solicitor.—October 23rd, 1873.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

FLOUR MILL COLLIERY (Limited).—Capital 12,000l., in 50l. shares.
To purchase the Flour Mill and Elwood Collieries, in the Forest of Dean.
The subscribers (who take one share each) are—Francis Parry, Esq., United Service
Club; F. Parry, Esq., 19, Westbourne-terrace; G. D. Budd, Randolph-road, Maid Hill;
W. H. Helyand, Butter's Green, Haywards Heath; J. H. Head, 90, Cannon-
street; Julius Goldsmith, 40, Grosvenor-street; W. D. Gooch, 4, Park-place Villas.

PATENT VICTORIA LANDAUET CARRIAGE AND CAB COMPANY
(Limited).—Capital 100,000l., in 5l. shares. To acquire patents for improvements
in the manufacture of carriages, &c. The subscribers (who take one share each)
are—William James, 34, New Broad-street; A. Herring, 24, Ludgate-hill; W. R.
J. Nominant, Nottingham Mews, Marylebone; E. Pratt, 45, Bridge-road, Ham-
mersmith; W. H. Nominant, 40, Warden-road; G. S. Lobban, Wesleyan-place,
Highgate; and J. C. Heslop, Charles-street, Long Acre.

ALLAN'S PATENT TELEGRAPH CABLE COMPANY (Limited).—Cap-
ital 100,000l., in 10l. shares. To acquire and work an invention for improvements
in submarine cables. The subscribers (who take one share each) are—Richard
Darmouth, Lavender-hill, Wandsworth; Robert Smith, 32, New Broad-street;
George Wood, Regent-street; J. S. Christopher, John-street, Bedford-row; J. F.
Lickertsen, 3, Lombard-court; Charles Trotter, Park-road, Regent's Park; and P.
Ramsey, Nelson-square, Blackfriars.

LONDON MUTUAL COAL ASSOCIATION (Limited).—Capital 50,000l.,
in 1l. shares. To carry on business as coal owners and merchants. The subscribers
(who take one share each) are—John Hawkins, Tavistock terrace, Upper Hollow-
ay; C. R. Lorant, 39, Fitzroy-square; James Parker, Boyson road, Waltham;
H. S. Smith, Little Stanhope-street, W.; F. W. Gittens, High-street, Camden
Town; C. Richards, Berkeley-road, N.; and G. S. Zalouss, Hampstead.

WILLIAM ARNOLD AND COMPANY (Limited).—Capital 100,000l.,
in 10l. shares. To carry on the business of boiler-makers and ironfounders. The
subscribers are—Thomas Allen, Leeds, 60; Richard Fletcher, Bradford, 60; R.
Hamphred, Grantham, 40; Henry Bray, Nottingham, 40; Thomas Lewin, Not-
tingham, 20; John Furness, Huddersfield, 10; and J. Warrington, Booth street,
Bradford, 40.

WERNIPSTILL COLLIERY COMPANY.—Capital 100,000l., in 5l. shares.
To acquire a colliery company at Briton Ferry, Glamorganshire. The subscribers
(who take one share each) are—H. L. Lamotte, St. Michael's House; P. F. Holden,
St. Michael's House; F. A. Rogers, Alsen-road; E. P. James, Kentish Town-road;
T. H. Potter, Great Saint Helen's; G. S. Warrington, 1, Gresham Buildings; F.
R. Kilnigh, 9, New Bridge-street.

NORTH AND SOUTH WALES BANK.—Constituted by Deed of Settle-
ment in 1858, is now incorporated as an unlimited company.

ROCK DRILLING APPARATUS.—According to a recent patent of
Major BEAUMONT, of Westminster-chambers, a number of rock drills operating by
percussive action, are all worked by one single slide valve detached therefrom, and
connected to the ports of all the drill cylinders by flexible or jointed pressure pipes,
so that by the motion of the slide valve the air or gas under pressure is admitted
simultaneously to, and exhausted simultaneously from, all the drill cylinders. The
partial rotation of the drills at each stroke is effected by a small air cylinder, sup-
plied from the pressure pipes, actuating a ratchet in gear with a ratchet wheel on
a rod from the drill piston passing through the back end of the drill cylinder. The
forward motion of the drill cylinder, as the boring proceeds, is effected by a curved
iron or cone on the said rod from the piston, actuating a ratchet in gear with a
ratchet wheel, carried by a bracket from the drill cylinder, and fitted with a female
screw on a fixed screw spindle. This screw spindle is provided with a hand-wheel
by which it can be rotated for drawing back the drill cylinder after the boring has
been completed.

WASHING AND SORTING COAL AND MINERALS.—The characteristic
feature of the invention of Mr. M. EVARD, of St. Etienne, Loire, is the removal
from a charge of coal, after it has been emptied into a deep vessel, the bottom of
which is moveable and perforated, of all the various components of the same, various
in size as well as in quality, without any loss or waste whatever. To obtain this
result the charge is first acted on by an ascensional and intermittent current in
order to drive all the fine particles to the top, then graduated fluctuations of the
water are produced from the greatest height that can be usefully employed down to
the smallest in order to sort the qualities. The slimy portions are next allowed to
settle and deposited during an interval of rest, which varies from two to five minutes,
according to the nature of the coal. Lastly, the washing table is raised up to the
surface of the vessel in order to effect the selection and removal of each quality.

THE NERVES CONVEY TO HEALTHY HUMANITY all that is satis-
factory and enjoyable between the inner self and the outer world. Weak nerves
lead to death for deliverance from intolerable miseries; neglect augments the growing
evil; more serious symptoms soon set in; the stomach becomes disordered;
more or less feverish signs appear, followed by loss of appetite, strength, and
energy. As a counteractive to these terrible evils it is only necessary to take mod-
erate doses of Holloway's pills, which purify the blood, and give a healthy action to
the vital functions. Under their potency strength supercedes weakness, and the
miserable dyspeptic who shudders at the sight of food may dine well without fear,
and enjoy the pleasures of the table without apprehension.

AMERICAN IRON AND STEEL ASSOCIATION.

Since it is the Americans that we must naturally regard as our
principal future competitors in the iron markets of the world, it be-
hoves to watch with the utmost care the progress making by the
iron and steel manufacturers on the other side of the Atlantic, not
with any improper or exaggerated feelings of jealousy, but in order
that we may be enabled to continue to occupy the foremost posi-
tion, whatever may be the magnitude of the improvements by which
they seek to rival us; and as the American Iron and Steel Association
may be fairly relied upon as affording a thorough reflex of the posi-
tion of the siderurgic industries of the New World, it is essential that
British ironmasters should know what was done at the meeting of
that society just concluded. The meeting, although not, perhaps,
so fully attended as could have been desired owing to the short no-
tice given, was attended by representatives of most of the leading
manufacturers, and by the principal scientists devoting themselves
to metallurgical questions. The president—Mr. SAMUEL J. REEVES
—proved himself in every way worthy of the position he was called
upon to occupy, and his address was a highly interesting one. Re-
ferring to the relations of the United States with Europe in the sup-
ply of iron and steel, he said they had now passed the point of de-
pendence; they were now independent of the whole world. They
had the skill, the ores, the coal, and the capital. If there be no ad-
verse legislation by Congress they will be able from this time forth
to supply their own demand for iron and steel of every description,
and to export those articles to their neighbours. They now make
all kinds of pig-iron except spiegeleisen, and will ultimately be en-
abled to dispense with its importation. An agent for the sale of
railroad iron in New York city has acknowledged that his business
in the United States in the sale of English iron and steel rails is at
an end if their tariff laws remain as they now are. He observed
that their coal supply causes them no anxiety; they have scarcely
begun to scratch at their great deposits, and a century will roll by
before they feel the necessity to economise in the use of fuel. The
proposed visit to America of the British Iron and Steel Institute
was very pleasantly referred to. He hoped the Association would
welcome the visitors warmly, and endeavour by all the means in their
power to give them a proper impression of the greatness of the iron
industry of the country. The iron interests of the country are so
vast that, if united, their action would always be respected by the
entire nation, and the labour of protecting themselves would thereby
be greatly lessened. They could then advance in solid column, with
an unbroken front, without fear of danger from external opposing
forces.

The statistical report prepared by the secretary, Mr. JAMES M.
SWANK, was an able and exhaustive one; he remarked that with the
close of the Franco-Prussian war the European demand for iron to
repair the waste of the war, to compensate for decreased iron pro-
duction during its continuance, and to facilitate railroad construc-
tion very greatly increased. The demand from all causes was fed
by the abundant capital which had been let loose at the close of the
war, and now sought investment. In the United States the fever
for building railroads, added to other causes influencing the Euro-
pean market, produced an extraordinary demand for iron in 1871.
The Americans built over 7000 miles of railroad in that year, and
they needed iron for ships, bridges, architectural work, and all the
other purposes to which an inventive and prosperous people could
adapt it. The rise in iron began in the latter part of 1871, and the
rise in coal during the following winter. Simultaneously with
these advances, the British coal and ironstone miners and the iron-
workers renewed the agitation for an advance in wages, and they
were generally successful. The result was inevitable. The colliery
proprietors still further advanced the price of coal, and the iron-
masters still further advanced the price of iron. The supply became
unequal to the demand, although production was everywhere stimu-
lated. In the United States 40 new blast-furnaces were erected,
and the erection of others was undertaken, the foreign demand for
British iron and the increased cost of producing that iron leading
to the reasonable presumption that the Americans would now be
able to possess their own iron markets.

At present, however, stocks of pig-iron are accumulating in many
districts for which there is no sale at any price. Most of the bar
and rail mills that are now running are working on short time.
Rail-mills especially are bare of orders, with no immediate prospect
of a change for the better. The plate-mills are more favoured.
Thousands of ironworkers at the beginning of winter are out of
employment, while a large proportion of those who are yet em-
ployed have accepted a reduction of wages averaging 15 per cent.
The mining of iron ore has sympathised with the prostration of the
iron trade. The crisis, however, and the conditions which preceded
it, have produced one result which will reach into the immediate
future, and which all men may easily comprehend: the home pro-
duction of all kinds of iron will be equal to the home demand, under
any circumstances, for some time to come.

The production of pig-iron in the United States in 1872 was 2,830,070
net tons, or 2,526,848 gross tons. This quantity was produced in 21
States. The ascertained production during the first six months of
1873 was 1,393,075 net tons, and the estimated production for the
whole of the year 1873 is 2,695,434 net tons, or 2,406,637 gross tons.
The number of States which made pig-iron this year was 22—Maine
having re-entered the list after a long rest. The excess of production
in 1872 over the estimated production of 1873 is 134,636 net tons.
If the financial crisis had not occurred, the production of 1873 would
have exceeded 3,000,000 net tons. The estimated annual capacity of
all the furnaces in the United States is 4,371,277 net tons. The total
number of furnaces in the United States, exclusive of abandoned and
projected furnaces, is 636. The total number of new furnaces finished
and put in blast in 1872 was 41; finished and put in blast in 1873, 42;
total number of new furnaces put in blast in the last two years, 83.
Many of these are among the largest in the country. Pennsylvania
still retains her position at the head of the States making pig-iron.

The total number of net tons of iron and steel rails made in the
United States in 1872, as reported by the makers, is 941,992, or
841,064 gross tons. This aggregate was produced in 16 States.
Pennsylvania made 419,529 tons, or 44½ per cent. of the whole.
Ohio comes second in the list, taking the place which Illinois held
in 1871. Illinois is the third State in the list, and New York the
fourth. The production of rails in the United States in 1871 was
775,733 net tons; in 1872 it was 941,992 tons; increase, 166,259 tons,
or 21½ per cent. The importation of foreign rails in 1871 was
566,202 net tons; in 1872 it was 530,850 tons; decrease, 35,352 tons,
or 6¼ per cent. The net gain of the American railmaker in 1872
over his foreign rival was, therefore, 201,611 net tons. Of the total
production of 941,992 net tons of rails in 1872, 94,070 tons were
Bessemer steel rails. In 1871 there were produced 60,042 net tons
of steel and steel-headed rails; increase, 34,028 tons, or 56½ per cent.
Of the 530,850 net tons of rails imported in 1872, 149,786 tons were
steel rails. The total consumption of iron and steel rails in 1871
was 1,341,935 net tons; in 1872 it was 1,472,842 tons; increase,
130,907 tons. This increased consumption was more than equalled
by the increased production of American mills, which was 166,259
tons, as above stated. During the year 1871 the export from the
United States of American railroad bars and rails was 306 net tons;
during 1872 the export was 1293 tons; increase, 323 per cent.

An estimate of the production in 1872 and 1873 of the merchant
bar, plate, and other rolling mills, inclusive of rail mills, shows
that in the former the production was 1,941,992 net tons of rolled
iron, against, probably, 1,830,000 net tons in the latter. Further,
there were produced in the United States in 1872 about 32,000 net
tons of cast steel, and in 1873 there will be produced about 28,000
tons. In 1871 there were converted 45,000 net tons of Bessemer steel;
in 1872, 110,500 tons; and in 1873 it is estimated that there will be
converted 140,000 tons. About 85 per cent. of the Bessemer steel
that is now converted in American works passes into rails. The total
quantity of pig metal converted by the pneumatic process in 1872 was
125,361 gross tons. During the first nine months of 1873 the total quan-
tity converted was 127,384. The production of steel in the United States
by the Siemens-Martin process aggregated only a few thousand tons in
1872. Business was confined to seven establishments. As this quality
of steel cannot be so cheaply produced as Bessemer steel, it is difficult

to estimate the extent to which its production will be carried in
future years, but we hear of one new enterprise in its manufacture
having been inaugurated this year. The total annual capacity of
the eight Bessemer works now in operation is about 170,000 net tons
of rails; to which add Edgar Thomson, and new plant of Penn-
sylvania Steel works, now constructed, and the total capacity of the
Bessemer works of the United States at the close of 1874 may be
placed at 220,000 net tons of rails.

Summarising the results thus arrived at, it will be found that the
ascertained and estimated production for 1872 and 1873 was—Of
iron and steel rails, 941,992 tons in the former year, against 850,000
tons in the latter; of other rolled and hammered iron 1,000,000
tons, against 980,000 tons; of forges and bloomeries 58,000 tons,
against 50,000 tons; of cast-steel 32,000 tons, against 29,000 tons;
of Bessemer steel 110,500 tons, against 140,000 tons; of Siemens-
Martin steel 3000 tons, against 5500 tons; and of pig-iron 2,830,070
tons, against 2,695,434 tons. During the year under review No. 1
charcoal pig-iron has been shipped from Lake Superior to Great
Britain. Iron of this quality is essentially necessary in the manu-
facture of certain iron products; but, owing to the cutting down of
some of their forests, and the absorption of others by the gentry,
England and Scotland now manufacture but a small quantity. There
is but one charcoal furnace now in blast in Great Britain. It is re-
marked that English and Scotch founders have of late made some
advances towards the adoption of the American method of making
car-wheels, which requires charcoal pig-iron of the best quality.
It may be possible that these founders will hereafter require a part
of the American product for this purpose. But this demand would
be entirely exceptional, and could not be regarded as at all affect-
ing the general proposition that the United States cannot compete
with the United Kingdom in its own markets for its own iron sup-
ply. It is thought to be more probable that the Lake Superior pig-
iron which has been taken to England has been purchased at a loss,
with the view of inducing the makers of Swedish pig-iron to lower
their prices.

The remainder of the proceedings were of the usual business cha-
racter, and, therefore, chiefly of local interest. The financial posi-
tion of the Association is highly satisfactory, the credit balance
amounting to \$11,256, and the Association seems to be altogether in
a very prosperous condition. The protectionist feeling appears still
to predominate, and is well represented in the observations of the
Hon. D. J. MORRELL, who remarked that the American supply of
steel rails is now equal to the demand, and they will be able to con-
trol their own markets hereafter if prices in England do not so
greatly recede that her manufacturers will be able to ship steel rails
to the United States. In view of this possible event protection
must still be continued. Amongst the resolutions passed was one
to the effect that the Association had learned with great satisfac-
tion that the members of the Iron and Steel Institute of Great
Britain propose to visit America next year, for the purpose of ascer-
taining the extent and progress of the iron and steel industries of
the United States, and that the members of the Association will ex-
tend to them a hearty welcome, and will take pleasure in showing
them their several works, and in otherwise aiding them to accom-
plish the object of their visit. The meeting, which must be re-
garded as in every respect a very successful one, was soon after-
wards adjourned until the first Wednesday in February, and it was
resolved that the other iron associations be requested, through their
secretaries, to meet with the Iron and Steel Association in joint
convention on the following day.

THE IRON ORES OF SANTANDER, SPAIN.

The formation of an English company for the development of se-
veral important iron deposits around the Bay of Santander, in the
North of Spain, attaches an interest to the reports of the engineers
who have examined the properties which it is proposed to work. It
is very truly remarked that for many years the Spanish hematite ores
have been favourably known in this country, and ironmasters are
daily becoming more alive to the necessity of seeking supplies from
the Spanish mines, as it is a fact well known to all interested in the
iron trade of this country that the supply of iron ores in Great Britain
is far short of the demand. The position of this property, its close
proximity to the sea, with railway adjoining, the excellent facilities
for shipping the ores in one of the finest bays on the coast—that of
Santander—and the increasing demand for this ore, are referred to
as combining to render it one of the most valuable investments that
have ever yet been offered to the public; and as the company—the
SANTANDER IRON ORE COMPANY—which has been formed with
a capital of 80,000l., in shares of 10l. each, has arranged that the
purchase consideration shall consist entirely of shares and debenture
bonds of the company, and no payment whatever has been made to
promoters; the company is considered to stand in an unusually
favourable position for commanding the support of capitalists.
Samples of the iron ores and manganese assayed by Messrs. Johnson,
Matthey, and Co., gave from 59½ to 63 per cent. of metallic iron, and
93.25 per cent. of protoxide of manganese. The iron ore contains a
very small proportion of sulphur, and mere traces of phosphorus.

The iron ore, pyrites, and zinc mines, which form the whole of
the first or Maliano group, are contiguous the one to the others,
without any disconnection. They occupy nearly entirely the Penin-
sula of Maliano, which is limited to the north by part of the Bay of
Santander; to the south by the river of Maliano, which comes from
Boo, and carries vessels of from 300 to 400 tons burden; to the east
by the principal channel of the Bay of Santander facing the Lazareto;
and, lastly, to the west by the railway, at about 500 metres distance
of the first station (Boo, at 7½ kilometers from Santander). The
principal channel to the east admits vessels of every dimension, but
to reach it would be necessary to connect the Island of Paloma with
the Sierra by a small high road of about 40 metres on the rocky
foundation, and establish a wooden shipping jetty from the east
extremity of the island to the channel, a length of from 40 to
50 metres, and then ships might be loaded afloat, being 8 to 10 metres
in depth, if required. This group comprises five mines, the first,
second, and fourth (Resguardos, Santa Rosa, and Santa Carolina) con-
taining together 225 hectares, and concessions have been applied for
with respect to 260 hectares adjoining. Mr. Ratier, by whom the
property has been inspected, estimates that the iron ore is equal to
1,250,000 metres = 1,875,000 tons, worth 51 per cent. of metallic iron.

In addition to the iron ore, a bed of zinc exists close to the sea,
at the north-east extremity of the Peninsula of Maliano, and which
protrudes into the sea at that point. We have extracted some by
taking some of the soil at low water, about 300 tons of lead cala-
mine, yielding 42 per cent. of zinc; and blende ore also, with lead,
yielding 47 to 48 per cent. of zinc, the lead not exceeding 3 to 4 per
cent. This bed should be very interesting, as it has shown itself under
a width of from 8 to 10 metres, and it appears to cross from north-
east to south. The whole of the Peninsula of Maliano crosses, with-
out doubt, at a considerable depth the principal bed of pyrites, which
would thus become of great importance. It would be advisable to
make borings there. A similar bed is worked largely at a small dis-
tance, and on the same conditions, which has given considerable re-
sults. Zinghas also been discovered elsewhere in the concessions, for
Mr. Ratier explains that the whole part north-west and south-west
of the Mine Venera second, which, as we have said, is nearly con-
tiguous to the three mines of Muriedas, includes the spot called La
Pandara de Resebla, Venta le Verde, &c. Now, at about 100 metres
to the east of this last point there has been discovered a bed of zinc
calamine unblended with some portions of galena. There some
small workings have been made but only at a depth of from 2 or
3 metres, and a length of from 10 to 12 metres, and 4 to 5 metres in
width. The ore taken out, in pretty large quantities, was every
way similar to that of Pagine. It is to be remarked that these soils
are filled with limestone and iron ore similar to the richest zinc
mines, as at Gajano and Maliano. The bed runs in a direction of
from north-east to south-west.

With regard to the Pena-Cabarga group of mines, which embraces
over 570 hectares, the same authority remarks that the geological
formation is most remarkable. Its form and its situation are longi-
tudinal in the direction from east to west. Through the effect of
the upheaving the crests are laid bare, and in consequence of slips

BRITISH MINES.

[For remainder of Foreign Mines, see to-day's Supplement.]

ORIGINAL HARTLEPOOL COLLIERIES COMPANY.—At the meeting, Wednesday, an interim dividend of 5 per cent. was declared.

WALDBECK FEELS.—P. Hawke, R. Trevarthen, Dec. 10: We have intersected in the cross-cut, about the point expected, the great south lode in the deep adit, but have broken into it a few inches only, which consists of spar, porphyry, and sulphur. We have holed the wing below the deep adit and have found a small vein of the same material. The vein in the drift, which has opened out valuable tribute ground, and the workings are thoroughly ventilated as well. The 10 fm. level east, on the great south lode, produces 20 cwt. per fathom copper and lead ore. We are making good progress in the 20 south-east, on account of the great size of the vein, and the 20 west, on the north lode, is in the lead and silver. The 20 west, on the north lode at junction shaft, is worth, for lead and

side, which is worth 15% per fathom for lead. There is no change in the stope.

The wine sinking below the 88 is set to four men, at 65. 5s. per fathom; the ground is congenial, with good stones of lead and a little blende. The sump sinking at Palmer trial set to four men, at 65. 10s. per fathom; the lode is composed of a beautiful gossan, with carbonate of lime, sulphur, and lead, worth 7. per fathom for the latter. Owing to the bad weather the engine-house has taken longer to build than was expected, but I am glad to say we expect to get it completed this week if the weather continues favourable. Surface work and machinery going on as usual.

EAST DARREN.—Dec. 9: Taylor's shaft: In the 116 east the lode is 4 ft. wide, much broken up and disordered, and unproductive for lead. In the stope over this level the lode is about 1 yard wide, yielding from 10 to 12 cwt. of ore per fm. In Skinner's shaft, sinking under the 104, good progress is being made, and the lode being carried down is large and promising, containing occasionally spots of lead. The pitches throughout the different levels on an average continue to yield their usual quantities of ore. We have failed as yet to secure men to resume driving the levels at Blawie engine-shaft. Our machinery is in good working order, drawing and dressing progressing regularly, and hope to same our usual quantity of 60 tons on the 23d inst.

EAST Llangynog.—E. Pascoe, Dec. 8: Fortnightly Report: We have not taken down the lode in No. 2 west for the last 2 fms. driven; we shall do so in the course of a few days, when I will advise you of its character. In No. 2 east the lode is improving in size and quality, and yielding good saving work for lead. No. 3 west continues to be driven in beautiful mineralised ground; the part of the lode varied in size, composed of friable rock, intermixed with gossan, quartz, sulphur, and lead, worth 5. 15s. per fathom. The footwall or clay slate by the side of the lode is rather hard, but there are indications of a change; when this takes place I am persuaded that we shall have a good course of ore in this end. The four stopes over this level are about the same in value as when last reported on. The rise over No. 4 level is still poor. No. 3 level has been driven upwards of 30 fms. in a good course of ore, and I fully expected to meet it in the rise immediately. The probable reason, however, is that there has come in the rise a floor of soft clay on the footwall, which has thrown the ore in another direction. I intend to push through the rise with all dispatch, as it is very much needed for ventilation; we shall then stop the bottom of No. 3, and follow the ore down. The rise over No. 4, on the north lode, has been holed to No. 3 level, and the men are now engaged in clearing the debris from No. 3; when this is completed we shall commence to stop the roof of the level. Nos. 5 and 6 have not changed since my last report. All the other stopes are yielding their usual quantities of lead.

EAST WHEAL BASSETT.—R. Pryor and Son, N. Bartle, Dec. 10: There is no particular change in any of the stope bargains throughout the mine since last report, with the exception of the lode in the bottom of the 110, east of cross-cut, which is worth fully 20. per fathom, with a wonderful healthy appearance. We attach much importance to this discovery, as we consider it speaks well for the bottom of the mine, particularly as all the levels below are some distance behind this point. Other places continue just the same as when last reported on.

EAST WHEAL GRENVILLE.—E. Hosking, W. Bennetts, Dec. 6: Setting Report: The engine-shaft to sink below the 120, by six men, at 30. per fathom for the remainder of the lift: the lode is 2 ft. wide, producing a little tin and copper. The 120, to drive west of engine-shaft, by four men, at 4. per fathom; the lode is 2 1/2 ft. wide, and worth for tin and copper 15. per fathom. The 120 cross-cut, to drive north, by four men, at 15. per fathom. The 119, to drive east of cross-cut, by six men, at 12. per fathom; the lode is 2 ft. wide, producing saving work for tin and copper. The 95, to drive east by 2 men, at 6. per fathom; the lode is 3 ft. wide, and worth 10. per fm. The stope above the 95 east, by two men, at 2. 5s. per fathom; the lode is worth 8. per fathom. The stope above the 95, west of wine, by four men, at 3. per fm.; the lode is worth 10. per fathom. The wine to sink below the 95 east, by four men, at 7. per fathom; the lode is worth 2. per fathom. We also set our men to sink and stop below the adit level, at an intermediate lode, at 4. 10s. per fathom, which will prove the character of the lode.

EAST WHEAL LOVELL.—R. Quentrell, Dec. 10: Setting Report: Fatwork: The 100 to drive west by twelve men, at 30. per fathom; the lode is producing about 2 tons of tin per fathom. The stope in back of the 90 west to six men, at 8. per fm.; the lode is worth 15. per fathom. Tregonebris: To drive and stop east in the 30, by nine men, at 15. per fathom; the lode is worth 30. per fathom. The shaft to sink to intersect the south lode in the adit, by four men and two boys, at 2. 5s. per fathom. We also set our men to sink and stop below the adit level, at an intermediate lode, at 4. 10s. per fathom, which will prove the character of the lode.

EXMOUTH (Silver Lead).—R. Trevithick, J. Cook, Dec. 6: Since our last report we have cut through the lode at the 40 fm. level north; on the western side we have a branch of lead 2 in. wide, which will yield about 4 cwt. of lead per fathom, but the ground is very hard on each side; about 5 fms. south of the cross-cut we commenced a rise, and within 2 fms. holed to a level which led us to a rise that leads to the 30 fm. level, but is too much out of repair to get up through. This morning we managed to get up 5 fms., where we found another level driven about 5 fms. south, and a cross-cut driven about 5 fms. west, in very hard ground, with no appearance of a lode. We intend to stop the cross-cut west for the present, and put those men to drive the north end, and put up a rise a few fathoms further south, which will prove the ground between the old workings and the south air-shaft or the south end at the 40 fm. level. We are making good progress with the deep adit north. The stope south are getting up in shallow ground, and making very fat and not yielding quite so much ore; the stope in the old mine has made quite a sudden change; the small branch of the stope, which was in the eastern ground have disappeared, and will reduce the stope from 12 ft. wide to about 3 ft. We hope, after another stope or two is put over, that it will improve again. Levels, roads, and machinery are in their usual good condition.

FLORENCE AND TONKIN.—Wm. Verran, Dec. 11: The shaftmen have not made that progress in cutting pit at the 45 fm. level we anticipated, owing to the hardness of the capel through which they have had to drive, but being now through it will speedily complete their bargain. We have found some stones of ore within the last day or two, but expect we shall have to drive a short distance east to meet with the shoot of ore seen in the wine, 25 fms. east of this point, where there is a good lode, and as the present bottom of the wine is some 8 or 9 fms. above the 45, we look forward to a prosperous future in this direction. The stope about midway between the engine-shaft and the wine is also producing fair quantities of ore, which we shall prepare for the market in due course, and hope to sample at Calstock the latter end of the present month. We shall push the points above named as fast as possible, with every reasonable expectation of great success.

FRANCIS CONSOLS.—W. Dodge, Dec. 9: There is no change to report in the show adit west, the ground is still favourable for driving, and good progress is being made.

FRON VELLAN.—Capt. Harper, Dec. 10: In the cross-cut, driving north of the deep adit level west, the men are making good progress with the driving; the ground is very hard and strong. In the No. 2 level, driving west from No. 1 sump, the lode is not looking so well at present, but it is of a very promising character, and we are looking daily for an improvement at this point.

FURZE HILL.—W. Dodge, Dec. 11: No. 1, North Lode: The 54 fm. level east has been set to six men, to drive by the side of the lode, and I anticipate getting under the ancient workings in about ten weeks from this date. The men are relieving in place and working Saturday afternoons, so that no time will be lost in proving this very important point. The stope in the back of this level are worth 3. 10s. per fathom; price for stoping 2. 5s. per fathom. Middle Lode: The lode in the 40 west is improving; present value 4. per fathom, looking kindly. The rise in the back of this level is producing good saving work. The stope west of the rise are worth 6. per fathom; price for stoping 3. 6d. per fathom. Our parcel of tin weighed 3 tons 5 cwt. 1 qr. 8 lbs., at 68. per ton, realising 226. 6s., the proceeds of four weeks' working.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., Dec. 6: The lode in the 105, east of King's engine-shaft, is improving in character, and producing very strong muddle, with fine stones of ore. The lode where cut through some short distance behind the 105 and is 17 feet wide, principally composed of capel, spar, and muddle, intermixed with yellow copper ore. The part of the lode carried in the 95 east is without change, being continued in easy ground between the north and south parts of lode for the last day or two, but expect we shall have to drive a short distance both north and south to the more effectual proof of the lode throughout in the direction of the shoots of ore passing down from the levels above; this mode of operation is looked forward to with some considerable interest, where we calculate on finding the dip of the eastern shoot of ore. The south part of the lode carried at the 95 east is over 8 feet, principally composed of spar, muddle, and good quality ore to the value of 1 ton per fathom, showing indication of further improvement. The lode in the wine sinking below the 92 is worth 12. per fathom. The lode in the stope in the bottom of the same level, east of wine, is worth 12. per fathom. The lode in the stope in the back of the same level is worth 12. per fathom. The lode in the stope in the back of the 70 is worth 9. per fathom.

GEM (Tin).—John Goldsworthy, R. Hancock, Dec. 10: In the adit cross-cut, driving north from the south lode, the stratum is showing indications of the lode being near, the bearing of the lode must have turned a little more north, or the cross-cut would have reached the lode ere this. We regard this as a favourable change, seeing that the even course and the lode are nearing each other. We anticipate good results in cutting the lode. In the rise on the north lode the lode is 4 ft. wide, producing saving work. In the wine sinking below the adit level, on the north lode, the lode is 4 to 5 ft. wide, of a most promising description, opening out profitable ground, worth 15. per ton. We propose to drive a cross-cut north in the 20 to reach the north lode, and from the underlie there is 9 fms. to drive to reach the lode, and, judging from the lode in the wine we look forward to open up a valuable piece of tin ground.

GLASGOW CARADON CONSOLS.—W. Taylor, W. J. Taylor, Dec. 10: The lode in the 75, both east and west, is improving—east worth 20. per fathom, and west 12. per fathom; we expect them further to improve shortly. We have still a good lode in the wine coming down from the 65, and hope to soon indicate this with the 75 east soon; this will enable us to take away ore ground in this level. We have commenced another wine west of long wine, in the bottom of the 65, to come down on the 75 west lode, worth from 15. to 20. per fathom—ground easy. No other change of importance. We shall next week give full report of setting, &c. We finish sending away the ore to day, which will be sampled to-morrow; we expect it will come to over what it is estimated (say, 200 tons), and hope we shall get a good sale.

GOGINAN.—Dec. 9: The lode in the 100 fm. level east is 4 ft. wide, showing a little lead ore, but not sufficient to value. The lode in the stope over the 110 east is worth 1 1/2 ton of lead per fathom. These stope are now nearly worked up to the bottom of the 100 fm. level. A rise is being put up over the 70, by six men, for the purpose of making the new western shaft, and as soon as we can procure more hands we shall continue the shaft down through the old stope. Bryn Pica shaft is being repaired as fast as possible with the men we have. The new water-wheel has been put up, and was set to work on Tuesday last; it works beautifully. The carpenters are now busy about the pipes, pulley stands and frame for drawing-machine, &c. The tribute pitches in the old part of the mine are worth on an average 1/2 ton of silver-lead ore per fathom. All surface work is being pushed on with the utmost dispatch. We have this day sampled 20 tons of silver-lead ore.

GORSIEDD AND CELYN LEVEL.—Wm. Edwards, Dec. 10: The Gorsiedd vein is easier for driving, and improves in the production of lead ore. The sinking of the Gorsiedd winn-pit is also going on satisfactorily. At Coetia Gelynen, I am pleased to say, we are down 12 yards.

GREAT NORTH CARADON.—G. Rickard, Dec. 10: No. 3 copper lode has been opened on in the centre of the estate a few feet below the surface; it is composed of quartz and gossan, and is altogether a new discovery, and has an east and west direction; this lode has been seen nowhere else in the set; the ground above it is very easy for opening, and a trial could be made of its prospects and value at a very moderate expense, which I should recommend to be done. No. 1 lead lode, discovered at the adit level in the north-west part of the set, has been driven on about 36 fathoms; it varies in size from 1 ft. 3 in. downwards; in places the lode produces good lead ore in lumps weighing 14 lbs. A wine has been sunk below the

level about 4 fms. In the bottom of the wine the lode is about 4 feet wide; the water having been too quick to be kept by the tackle the sinking was suspended until more effectual appliances could be introduced to master it; the lode in the present bottom is composed of killas, peach, and quartz. This lode has never been seen elsewhere, and is quite a new discovery, the character and quality of it shows it to contain important prospects, and viewed in the light of an indication is almost as much as can be expected at the depth from surface—6 to 10 fathoms. No. 2 lead lode has not yet been opened on by the present company; it was opened on about 50 years ago to a depth from surface of about 10 to 12 fathoms by means of a small water-wheel, and the levels extended on its course a short distance. From the levels and back lead ore was sent into the market; this is an important fact which speaks for itself. A lode with ore cropping up to surface in such quantities may reasonably be expected upon being laid open to prove productive. Levels extended from the present engine-shaft would effectually unwater the workings on this lode, and lay open backs of great extent at a moderate cost. The engine-shaft has been sunk about 25 fathoms below the surface, and a cross-cut extended south from its bottom about 22 fathoms. At 8 fathoms from shaft the silver lode has been intersected, which is about 1 foot wide, composed of muddle, fluor-spar, peach, copper ore (yellow) of good quality, and a little silver in the muddle, altogether a most promising lode, containing the elements that usually are associated with deposits of ore; this lode has a north underlie, and according to its present dip would be near the engine-shaft another sink of 12 fathoms, which I should recommend to be accomplished as soon as it is practically could; this lode is a new feature, and has every appearance of being an important one. At about 22 fathoms south of the engine-shaft, in a cross-cut at the 25, No. 1 copper lode has been intersected; the point where the cross-cut has gone through it is about 4 feet 6 in. wide, composed of quartz, killas, peach, muddle, and spotted with rich copper ore. The cropping up of the shoot of ore driven through in the adit level to the west of this cross-cut, and we expect to have several fathoms to drive before we get the level into the same run of ore ground. Good progress is being made in driving west, and the lode has produced good stones of rich yellow and grey copper ore; the prospects of this level are of great importance, as it is fully expected when the run of ore ground in the bottom of the adit is reached a productive lode will be the result. The large water-wheel drives the pumping machinery most effectually; we have rarely anything in the shape of a let with our machinery. The statement laid down before the company to the effect that the abundant water-power available is sufficient to carry on operations on a large scale is not likely to prove incorrect. With an eye to the future requirements of the mine in the shape of mechanical power for the development of the property, it has been considered good policy to provide for them in advance, and not run the risk of delay in this important section of the company's operations. Acting upon this idea a large section of the River Camel has been abstracted and placed on the property, which is of great power. Too much importance cannot be placed on this prudent arrangement, it is an excellent foundationstone under the feet of the company. This section of the River Camel is below and entirely without the limits of the set, but nevertheless can be applied to it without mechanical difficulty. The set is about 1100 fathoms in length and about 500 broad, with 50 fathoms of backs to be gained above adit. It is on the junction of granite and killas and embracing both. The lease is granted for a term of 42 years, at 1-24th royalty or dues, no minimum rent. A new line of railway, for which the Act has been already obtained, passes through the mine, and the advantages of high backs above adit, the abundant water-power for developing the various lodes, the scope of set, the favourable terms on which the lease is granted, and the communication for cheap transit of minerals from the property to port, it is submitted that this property presents more than ordinary advantages for the investment of capital.

GREAT RETALLACK.—J. Harris, Dec. 6: In clearing out the 20, east of the new shaft, we have intersected a good floor of blende that will produce fully 15. ton of good ore per fathom for the present, and we are laying out the level in a good tributary ground. In clearing the 30 east I was able to get in to see Stephen's shaft-to-day, which I found full of stuff and crushed to pieces, which will be of no further benefit to the mine. I have been told the best blende ground in this level was found east of this shaft, so I hope we shall get into something better soon.

GREAT WEST VAN.—James Roach, Dec. 11: The 45, west of cross-cut, contains specimens of lead ore, but the greater part of the lode is still behind a slicken slide, and from which water flows freely. We are now cutting through the lode at this point, and expect every hole we bore will water the level, and under the 31, and in which we have a good course of ore. The 31, east of shaft, is yielding 2 tons of lead ore per fathom, and good progress is being made in driving, therefore we are opening out stoping ground fast. The 34 west is in a splendid lode, and the drive is yielding about 1 1/2 ton of ore per fathom. We have still a large portion of the lode lying in the footwall. This will be cut down against next week, and its value for ore reported. The wine under the 22 is considerably ahead of the last named forebore, and going down in a porous and vugly lode; that part carried down is worth for ore 30 cwt. per fathom, and the remainder contains ore throughout. In the 22, east of the 129 fm. level, we are still cutting through the 31, and this is literally filled with carbonate of lead in every conceivable shape. It is a great picture. The stope are still without any important alteration. We shall sample another parcel of 50 tons of lead ore in a few days.

GREEN HURTH.—Wm. Vipond, Dec. 7: The new south end is about the same as reported last week. The ore is not so regular as formerly, but is still very productive. There is no change in the stope; it will get into more productive ground every week. In driving south from the incline the slime or branch has been switched this week, and consequently less ore. We are still cutting through the branch of ore in driving in Eirewast. Low level as usual. We have sent 3 1/2 bins of ore to market since last settlement. The weather is very fine for outdoor work and dressing ore.

GUNSLAKE (Clitters).—W. Skewis, J. C. Seemore, Dec. 10: The lode in the 184 fm. level east continues to be worth 42. per fathom. The lode in this level west is making larger now, about 2 1/2 ft. wide, composed of quartz and copper ore, worth for the latter from 12. to 14. per fathom; this end is looking very promising for further improvement. The lode in the wine sinking in the bottom of the 152 fm. level is worth 15. per fathom; this looks well for the bottom level. The stope are without change. The shaftmen are now preparing to fix the plunger-lift at the 152.

GWYDER PARK.—W. Bennetts, Dec. 10: I am glad to say the lode in the 25 east has very much improved in the last 3 ft. driving; the lode is now worth 9 cwt. of lead per fathom. The lode in the 25 east and south is of much the same character as last reported. The same remark will apply to the stope in the back of the 25 fm. level.

HINGSTON DOWN CONSOLS.—J. Richards, Dec. 11: Bailey's Shaft: At the 150 fm. level the shafts are being cut; no portion of the lode, however, has as yet been taken down. In the 140 fm. level west the ground from point of horse and between the two parts of the lode is being stripped down, and satisfactory progress is being made. The lode in the stope in the back of this level (the 110 west) is still worth 40. per fathom. In the 120 fm. level west the lode is again being disordered from the near approach to the cross-course; its present value is 5. per fm. In Wadge's sinking below the 120 fm. level west fair progress is being made, and we hope to effect a communication with the 140 fm. level in the course of next week. In the 120 fm. level east of the 129 fm. level, west of the 45, east of the lode is worth 12. per fathom. The lode in the stope in the back of the 120 fm. level, west of James's wine, is worth 15. per fathom. In the 110 fm. level west, the ground proving favourable, good progress is being made by the side of the lode.

ILLOGAN.—R. Pryor, Dec. 10: During the past week there has been no change throughout the mine worthy of remark. The shaftmen continue to make good progress with their work. The masons are getting on well with the building of the engine-house, and the carpenters are actively engaged about the necessary woodwork for the same. All things at surface are proceeding quietly and favourably. As Friday next will be our pay and setting day a full report shall be sent you.

LADYWELL.—A. Waters, Dec. 11: Setting Report: The 15, north of engine-shaft, by four men, at 12. per fathom; lode at present yielding stones of ore. There is more water than usual coming out of this end, indicating our approach to softer ground and a more open lode. We know that a run of ore in soft ground is gone in front of us from the deep adit. The 15, south of shaft, by four men, at 3. per fathom; lode 5 ft. wide, composed of fine, clay, gossan, and iron rocks, and in which we have a good course of ore. The 15, east of shaft, is yielding ground seen in the deep adit in the old company's time. I never saw finer stuff than that brought out of the said end to-day. The deep adit south, on New Britain vein, by two men, at 6. per fathom; lode 2 1/2 ft. wide, of a promising character. Main Lode: The shaftmen have to-day put down new drawing lift, and will begin to-morrow to sink below the 15 for good. The 15, north of flat-rod shaft, by two men, at 3. per fathom; lode 4 feet wide, containing a good mixture of lead ore throughout.

NASARONEN.—A. Francis, Dec. 10: The deep adit level is being pressed forward with as many men as is practicable towards the lode, where one stone of lead ore alone was found on the back of the lode that yielded nearly 1 ton of clean lead ore, so that when this point is reached there can be no doubt of our opening on a very rich course of ore. In sinking under the adit in the western mine the lode continues to improve daily, and all that is now wanted is the necessary machinery and dressing apparatus to bring us into a state of dividend.

NEW CROW HILL.—T. Trelease, Dec. 9: We have completed the casing and dividing, and have put in ladder-rods, and sent the water to the 100 ft. level, and in working well. We have now begun to drive a cross-cut towards the lode, and I calculate we shall cut the lode by our next setting-day, which is Saturday week, if we get no hindrance with the machinery or pitwork.

NEW DOLOCOATH.—J. Vivian and Son, N. Glymo, Dec. 11: In the stope in the western end of the sink under the 140, west of east shaft, the lode is 6 ft. wide, the south part of which is yielding 2 tons of copper ore per fathom, whilst the north part is yielding tinstone of very good quality, and is improving in this respect as we are getting further west, the lode being now worth for copper and tin about 15. per fathom. In the 33, west of engine-shaft, the lode is 2 ft. wide, and producing copper in tin stone worth 7. 10s. per fathom. In the rise over the last named level, the lode is 1 foot wide, and worth for copper and tin about 7. 10s. per fm. We are getting another parcel of tinstone for sale, also a parcel of copper ore.

NEW GREAT CONSOLS.—R. Pryor, H. Bennett, H. Treggoning, Dec. 9: We have no change to report on any of our stope or tribute bargains since last week. Our pitwork since the alteration has been effected thereto has continued to work most satisfactorily, and resulting in a great saving in the consumption of coal. No. 7 calciner is complete, and the new dressing floor in connection therewith will be finished in the course of a few days. Saturday being our pay and setting-day, a full report shall follow.

NEW PEMBROKE.—F. Puckey, C. Merrett, Dec. 8: The engine-shaft is sunk 4 1/2 fathoms below the 110, and we are now preparing to fix the standing lift at that level. In the 110, west of the shaft, the lode is 2 ft. wide, but unproductive for mineral. In the same level, east of the shaft, the south part of the lode is still small and unproductive. In the cross-cut driving north, to intersect the north part of the lode, the ground is favourable for progress. In the 100 fm. level end, driving east of the shaft, the lode is 2 ft. wide, and worth 7. In the 60 fm. level end, driving east, the lode is 2 ft. wide, and letting out a large stream of water, with very promising indications of an early improvement. In No. 1 stope, in the back of the 90, west of the eastern wine, the lode is 5 ft. wide, and worth 18. per fathom. In No. 2 stope, in the back of this level, the lode is 6 ft. wide, and worth 40. per fathom. In No. 3 stope, in the back of this level, the lode is 5 ft. wide, and worth 20. per fathom. In No. 4 stope, in the back of this level, the lode is 4 ft. wide, and worth 18. per fathom. In the stope in the back of the same level, on the north part of the lode, the lode and branches for 5 ft. wide are worth 35. per fathom. In the stope, west of the shaft, the lode is 2 ft. wide, and worth 7. In the 60 fm. level end, driving east, the lode is 2 ft. wide, and letting out a large stream of water, with very promising indications of an early improvement. In No. 1 stope, in the back of the 90, west of the eastern wine, the lode is 5 ft. wide, and worth 18. per fathom. In No. 2 stope, east of the wine, the lode is 4 ft. wide, and worth 15. per fathom. In No. 3 stope, behind the end, the lode is 4 ft. wide, and worth 10. per fathom. In the 75 cross-cut, driving north-east of the shaft, no

lode has been met with since last reported. The lode in the rise in the back of the 68, on the south lode, is 3 ft. wide, yielding a little tin, and looking promising for improvement, as in the stope in the back of the 60, on the same lode, and over the rise, the lode is 3 ft. wide, and worth 14. per fathom. In the stope in the back of the 60, east of the shaft, on the main lode, the lode is 3 ft. wide, producing stones of tin and good stones of copper ore, together worth 12. per fathom. At the 60 we are driving a cross-cut north to intersect the south lode, which we expect to meet with in a few fathoms driving. At the 45, driving west from the old engine-shaft, on the south lode, the lode is from 4 to 5 ft. wide, composed of quartz, peach, and copper ore.—Western Part of the Mine: At Edgemoor's shaft we have dropped the lift, and forked the water 4 fms. below the 120; about 2 fms. below the 120 we find a part of the red lode has passed through the shaft, and from the levels below, as far as we can yet see, the former company met with a rich lode of yellow copper ore. We are now engaged in securing the shaft, and making preparations for fixing a plunger lift at the 120. We then intend to again drop the lift to the 142, which we understand to be the bottom of the engine-shaft, and where we expect to find a productive lode both for tin and copper. In the 120 fm. level cross-cut south, east of the shaft, no lode has yet been met with; the ground is favourable for driving. The 120, west of the shaft, is now cleared and secured for present end, which has been driven west of the cross-cut 42 fathoms; the lode in the end, although small, will produce some good copper ore. From the back of this level we are putting up a rise in order to prove the lode, and ventilate the level. The lode in the rise is 3 ft. wide, and has produced saving work for copper.—East of the lode, the most promising level we have seen in the mine. In the west, on the Red lode, the lode is 6 ft. wide, composed of soft quartz and peach, and a quantity of fine muddle, with spots of yellow copper ore.

NEW ROSEWARNE.—E. Hosking, W. Bennetts, Dec. 6: The lode in the 104, east of Bickford's shaft, is worth 11. per fathom. The lode in the 104 west is worth 11. per fathom, and producing good stones of copper ore. We have placed two men to rise above the 94 to communicate with a wine sink below the 94 fm. level, where we have been told, the former workers had a good lode of copper ore. The lode in the 46 west is worth for the part carrying 11. per fathom.

NEW WHEAL TOWAN.—R. Pryor, Dec. 10: Since my report last week there has been no particular change throughout this mine calling for remark. The lode in the stope in back of the adit level continues to be worth about 8. per fathom for tin. As Friday next will be our pay and setting day, a full report shall be sent you.

NORTH CROFTY.—Joseph Vivian and Son, William Thomas, Dec. 11: The mine throughout continues as last week.

NORTH HENDRA.—J. Lean, Dec. 11: No alteration calling for remark has taken place in the underground department since last report, every point being pushed on with vigour. To-day we have holed, to Messrs. Walker, Parker, and Co., Mr. Eytton, 40 tons of ore, at 15. per ton, and is all ready to be discharged.

NORTH METAL AND HARRIET.—B. Gundry, Dec. 5: This being our setting day for the next four weeks, we have set the two 20 fm. levels to drive 2 fms. and 2 fms. west on the lode by our shaftmen, and to have 5. for cutting pitwork, securing ground at that level; this contract was taken at 70s. per fathom; as this is completed we intend sinking Archibald's engine-shaft below the 20, and putting other men to drive the 25 fathom level. The 10 fm. level east is set to two men and two boys, at 8. per fathom; about 2 ft. wide of the lode in this level is being saved for tin; the tinstuff from this level is assayed, its net value being 1. 5s. per ton. The 10 fm. level west is improved, about 1 foot wide of the lode is being saved for tin; we have now on the mine about 10 tons of tinstuff from the 10 east, at 23s. per ton, after taking out the best work, 1 bushel or barrow, worth about 3s. We have also 60 tons of tinstuff fit for stamping on the mine, and could raise tin fast from the backs of the different levels if we had stamping power attached to our engine; the water is still very moderate. Our surface work is much at present, just one man and four boys making a pond for engine water, and much about tin floors.

NORTH POOL.—W. C. Vivian, F. Clymo, Dec. 10: Since reporting last week we have passed through another small but rich vein of yellow copper ore in the 40 fm. level cross-cut. There is more water issuing from the rock, and the clay has become very favourable for progress within the last few days. Its general character is better than it has hitherto been for the production of copper. I expect we shall now make rapid progress towards the lode.

NORTH ROSEWARNE.—E. Hosking, Dec. 11: The lode in the 20, east of the engine-shaft, is 5 ft. wide, of a kindly appearance, and is yielding tin and copper, producing good work for tin, of which we shall see more in a day or two. The level below the 10, east of the engine-shaft, is 2 ft. wide, and producing a little copper ore. We have placed the wine men to stop the west end of the wine below the 10, where the lode is 15 in. wide, and worth 5. per fathom.

NORTH TANKERVILLE.—J. W. Powning, Dec. 10: Venus Bank: The aerial shaft is down 4 fms. 4 ft.; the rock in present bottom is stronger, and at that could be desired for the lode. In my next report I hope to inform you of the lode being cut.

NORTH TRESKERBY.—R. Pryor, Thos. Jenkin, Dec. 10: There has been a change worthy of remark throughout the underground department of this mine during the past week. Our operations on Snell's lode are being attended with satisfactory results, and we continue to make exceedingly good progress as regards the development of the deep adit level.

OLD BATHOLAS.—A. Waters, Dec. 11: Setting Report: The 69 fm. level, drive south of wine on big-spar lode, by six men, at 15. per fathom; lode yielding stones of ore. The stope in back of the 69, west of wine, by four men, at 12. per fathom; lode worth 30. per fathom. The 60 cross-cut, to go east of level in search of main lode, by two men, at 6. per fathom.

OLD TREBURGETT.—Wm. Hancock, Wm. T. Bryant, Dec. 10: Setting Report: The 50 to drive south of the engine-shaft on the lode by six men, two months' shaftmen, at 9. 15s. per fathom; this end is 4 fms. 3 ft. from the shaft, and calculate according to the dip of the ore at the level above to reach it in about 10 months unless it should be gone down more perpendicular. The 70 to drive south of the shaft by six men, two months, at 10. 5s. per fathom. The 63, west of the level below the 50, by four men, at 10. 5s. per fathom. We shall not take down the ore-bearing part of the wine until we have effected a communication with the No. 2 wine sink below the 60; there is about 9 ft. more to drive to get under it. The No. 1 stope in the level of the level by six men, one month, at 6. 10s. per fathom, and to have 4. for the timber; they would not take it for two months on these terms. The 30, stope by six men, to put it through to the 60, at 4. 5s. per fathom. The 30, stope by six men, two months, at 4. 5s. per fathom. The No. 4 contract not out; the stope are worth in the aggregate about 38. per fathom. The 63, west of the shaft, on the east part of the lode, contains a good quantity of ore, and the ore part will be taken down when the end is sufficiently advanced to do so, without hindering the progress on the former pit. The No. 1 stope in the level of the level by six men, one month, at 5. 10s. per fathom. The No. 2 stope, contract not out. The No. 3 contract not out. The No. 4 by four men, two months, at 4. per fathom, to be paid for fixing still; these stope are worth in the aggregate about 48. per fathom. The stope in the bottom of the level by six men, two months, at 6. 10s. per fathom, worth 30. per fathom. The No. 2 wine, below the level about 9 fms., being down to water is supposed to be 9. per fathom. The level below the 50, by four men, at 10. 5s. per fathom. There are put to assist the No. 3 stope to stop a piece of ground in back of the No. 2, so as to get in still over stope in bottom. To stop a piece of ground north and south of No. 3 wine under the 40 by four men, at 4. 5s. per fathom; at east part of the lode worth 10. per fathom. The filling, landing, tramming, and lifting stuff at the wines, and sundry contract work at surface, the month, by six men, at 10. 5s. per fathom, and at about the same prices. The lode will be delivered on the mine next Tuesday or Wednesday.

OLD WHEAL ROSE.—W. Scholar, Dec. 11: We have cleared the old wine shaft so as to get into the deep adit level, which we shall proceed to clear as soon as possible so as to work the stope. We shall now commence to stop the wine in shallow level. Nothing new to report at other points.

PANT-Y-MWYN.—William Wasley, Dec. 11: Having come to a great deal of water in the sump sinking in bottom of the day level, west of Griffith's shaft, have taken the men from there, and put them to stope in the roof of the day level, by Modlen shaft, where I am glad to say they are getting some good ore, and the lode looks very promising.

PARRY'S MOULTAIN.—Mitchell, Dec. 11: The ground in the 90 fm. level cross-cut continues favourable, and good progress is being made in the driving. The 65 cross-cut south through the lode is showing occasional stones of copper ore. In the rise in back of the 65 the men are at present stripping down the lode, which is turning down a good quantity of copper and sulphur. The cross-cut south of the 45 continues in easy ground, mixed with sulphur. This end will soon reach the point immediately over the rise going up from the 65,

WEST ESGAIR LLE.—R. Harvey, Dec. 11: There is no change in any of our underground operations since last report. We have the drawing-machine in the western mine again at work and all machinery working well, including dressing.

WEST GODOLPHIN.—John Pope, jun., Dec. 6: Caunter Lode, The Pressure shaftmen are busily engaged cutting barrow-road at the 50, preparatory to sinking for trip-plat, but it is a very troublesome piece of ground to remove, having to blast the whole of it, and at the same time forced to put in timber over this place to prevent it from falling over their heads; these men last month completed the

dividing and easing of the shaft from the 30 to the 50, and drove this level north-west of the shaft 1 fm. 5 ft. The lode in the 50, driving north-west of Pressure shaft, is $3\frac{1}{2}$ ft. wide, and worth 35¢. per fm. The lode in this level, driving south-east of Pressure shaft, is $3\frac{1}{2}$ ft. wide, and worth 20¢. per fathom. I am pleased to say that we have driven this level south-east and north-west of Pressure shaft about 17 fathoms, and it is the best level we have ever had for tin on the cauter lode. The lode in the 40, driving north-west of Pressure shaft, is small, but seems

The lode in the 40, driving north-west of Pressure shaft, is sandy, also being that we have two tribute pitches working in the bottom of the 30, a few fathoms before the 40, one at 6s. in 1 $\frac{1}{2}$., and the other at 9s. in 1 $\frac{1}{2}$. I think we may reasonably expect an improvement here soon. The lode in the winze sinking below the 40, south-east of Pressure shaft, is 20 in. wide, and worth 5 $\frac{1}{2}$ per fathom. The lode in the 40, driving south-east of Pressure shaft, is 2 $\frac{1}{2}$ ft. wide, saving work for tin. The lode in Vixian's shaft sinking below the deep adit is 1 foot wide, poor. The

lode in the deep adit level driving south-east of Vivian shaft, is 2 ft. wide, saving work for tin, with a large quantity of mundic.—Pink Lode: The lode in the 40, driving east of the caunter, is not looking so well as it has been; lode 18 in. wide, producing rich stones of tin, worth 5*l.* per fathom. The lode in the 40, driving west of the caunter, is 9 in. wide, poor. I calculate our next parcel of tin will be about 9 tons.

WEST GOGINAC.—J. Kitto, Dec. 8 : The lode in the 12, west of engine-shaft, is looking very well indeed, and is still yielding very good ore, and presents an excellent prospect for a deeper level. In the same (the 12) level, east of the shaft, we have not yet come up to the ore ground discovered in the adit, but shall soon do so, when we may reasonably expect a decided improvement. The winze sinking below the adit level for ventilation is poor at present, but the lode has not yet

been taken down to full width. The lode in the adit level west has been cut off and disarranged by a cross branch, but this is a matter of frequent occurrence, and I expect by continuing the driving in the direction we are now going that we shall soon meet with it again, and in all probability find it productive, as it is about these cross branches that we generally find the best bunches of ore. The pumping, with the horse-engine, is going on all right, and the various points of operation are

WEST GREAT CONSOLS.—R. Pryor, H. Vial, Dec. 9: The shaftmen are getting on well with the fixing of the pitwork, and everything, both underground and at surface, is progressing satisfactorily. As Saturday next will be our pay and setting-day, when a full report shall be sent you.

WEST GREAT WORK.—S. J. Reed, Dec. 11: In the flat-rock shaft, now 9 feet below 13, the Trepannage lode is 2½ ft. wide, worth 20¢ per fathom, and 1

Below the 16, the Tiscow Moor lode is 2½ ft. wide, worth 10¢ per fathom, and is really a splendid-looking lode; some stones we have broken to-day from the deepest point are the richest I have seen in the mine for a long time, the general appearance indicating the top of a large deposit of tin. In the 16, east of flat-rod shaft, the lode is large, worth 14¢ per fathom. The driftage west in this level has recently passed through a cross-course, the lode is again forming a regular foot-wall, and containing good saving work for tin. A winze sinking below the adit

WEST ROSKEAR.—T. Glasston, Dec. 11 : The rise in the back of the adit is up about 8 ft.; the lode is worth for tin and copper fully 45¢. per fathom. There is nothing doing in the ends, nor can anything more be done in them until the shaft is communicated with, for want of ventilation, consequently they are of the same

WEST STIPERSTONES.—R. Smitham, Dec. 10: The 40, north of cross-cut, is now through the blue slaty rock, into a grey stone similar to the white stone in the Bog Mine. The lode has not yet improved by the change of country spoken of. The frost has come on us, and the water is getting less in the reservoir.

WEST SWANSEA COLLIERY.—Lewis L. Bowen, M. and C.E., Dec. 10: I visited the colliery yesterday and found everything progressing satisfactorily, the workings can now produce an output of 50 tons per day. This output alone will yield from 3s. to 4s. per ton net profit; if railroad was complete at least 7s. to 8s. per ton would be realised. The directors are using every possible means to get the necessary consent of the Great Western Railway Company to put in the siding, so that

connection with the main line may be completed. The coal is now being mainly brought through the new pit, which answers well, and directors are very sanguine as to the large profits to be made, the outlay up to the present time being very moderate, that even an output of 50 tons per day would realise a handsome profit to the shareholders.

WEST TANKERVILLE.—Arthur Waters, Dec. 11 : Setting Report: The south

boundary shaft to sink below the 64, by six men, at 15^s. per fathom; 3½ ratmoms more will put us to the 50, as well as into the lode and middle of the ore ground. The 46 to drive south of shaft, by six men, at 15^s. per fathom; lode worth 22^s. per fathom, and improving as we advance. No. 1 stope in roof of said level, by six men, at 7^s. 10s. per fathom, worth 18^s. per fathom. No. 2 stope, by four men, at 7^s. 10s. per fathom, worth 30^s. per fathom. The winze below the 46, north of shaft,

WEST WHEEL GORLAND.—J. Mayne, Dec. 11: The different points in operation on the north and south leads continue to yield the usual quantities of tin.—*Mercury.* The sinking of the shaft is being rushed on with all dispatch and the

WEST WHEEL LUCY.—W. Harris, Dec. 11: We have got to the bottom of the old working, which is 6 fms. deep: I cannot say much about it before we

stope the bottom. It appears to me to be a great broil of leadstuff down to a certain depth. I think we could not do better than bring in an adit from the foot of the hill, which would prove it all through. Nothing has been done on Hitchins's lode since my last.

WHEEL ARGUS.—T. Trahair, Dec. 11: The lode in the stopes in bottom of the 30. east of winze, is not looking so well, the ground being harder and the lode not

so large. We can account for this by the stopes being driven further east than we should have driven them but for the bringing down of the skip-shaft. The men in the adit level have cleared this week 5 fathoms. We have taken up some water from going down from the adit level, and hope to take up some more in the course of a few days. The lode in the stopes in back of the 30, west from Collier's shaft, on the Elisha lode, is producing saving work for tin. The lode in back of the 30,

WHEEL COATES.—W. H. Martin, Dec. 10: On Saturday last we set to cut the plat east of the engine shaft at the 20 ft. level, to six men, bargain 45¢. The 20 cross-cut, to drive north from engine shaft, for the month, or hole to No. 2 winze, to six men, at 12¢ per fathom. No. 2 winze we set to six men and two boys, to drive south, at 12¢ per fathom. We have cut through the lode; it is 20 ft. wide

— W. H. Martin, Dec. 11: I have reported the lode in No. 2 winze worth 20¢ per fathom, but it is worth over 30¢ per fathom; the lode is 20 ft. wide. We took

the six men from ladder winze to drive east and west from No. 2 winze, to make a little room for the present. On Monday next they will go back in ladder winze again, and drive west towards No. 2 winze; we cannot drive east and west to any extent before we hole the cross-cut, because the lode and country from the cross-cut would be mixed. We hope to hole the cross-cut to the engine-shaft in a fortnight or three weeks' time; then these men will drive east and west from No. 2 winze and other places, to become jumping boxes built as early as possible. We

winze. We shall be obliged to have a burning-house built as early as possible; we cannot sell another parcel of tin before it goes through the burning-house; we lost 4/ per ton on the last parcel, and now we have a great deal more munda and copper; we must build one plain house; it will cost from 40/ to 50/.

WHEEL CREBOR.—J. Goldsworthy, Dec. 10: In the 120, east of Cock's shaft the driving is by side of lode, therefore we have no change to report this week. The stagers in back of the camp level are cutting hitches for stull timber. There

The stoping in both of the some level is cutting back. In the 108 east the lode is 3 ft. wide in the bottom of the level, and as the ore is dipping west, we expect to see the lode greatly improved as the driving progresses. The appearances of the lode are excellent, and will produce 4 tons of copper ore per fathom. In the 96 cross-cut south there is no change since last report. In the 72 east the stratum and the lode appear to be undergoing a favourable change. In the 48 east the lode is becoming settled, and

occasionally produces good stones of copper ore. In the rise above the 36 the lode is 3 ft. wide, producing 2 tons of copper ore per fathom, with a better appearance. There is no change in the tribute department.

WHEEL GRENVILLE.—E. Hosking, W. Bennetts, Dec. 6: Setting Report To rise above the 150, on the South Condurow lode, by nine men, at 22¢. per fm for 9 ft. extent: the lode for the part carrying is worth 35¢. per fathom. To drive

the 140, east of cross-cut, by four men, at 16 $\frac{1}{2}$ per fathom. In this end we have met with a good deal of mundle, which we never saw before in this lode, and although the lode is not now quite so good for tin, being worth 40 $\frac{1}{2}$ per fathom, yet judging from appearances, we think we shall soon see it again improve. To stop above the 140, east of cross-cut, by four men, at 7 $\frac{1}{2}$ per fathom; the lode is worth 20 $\frac{1}{2}$ per fathom. To drive the 120, east of north shaft, by six men, at 9 $\frac{1}{2}$ 10s. per

fathom; the lode 2½ ft. wide, and worth 18¢. per fathom. To sink the north shaft below the 120, by six men, at 16¢. per fathom; the lode is 2 ft. wide, producing saving work for tin. To drive the 110 east, by four men, at 8¢. per fathom the lode is 20 in. wide, and worth 8¢. per fathom. To sink the winze below the 110 east, by four men, at 8¢. 10¢. per fathom; the lode is worth 22¢. per fathom. To stop below the 110 east, by three men, at 2¢. 5¢. per fathom; the lode is worth 10¢. per fathom.

15s. per fathom. To drive the 100 east, by four men, at 4s. per fathom, the load is 2 ft. wide, and worth 7s. per fathom. We have also set 22 pitches to 49 men, at an average tribute of 12s. 1d. in 17, the tributors to be paid at the rate of 60s. per ton of black tin.

WHEEL GRENVILLE.—E. Hosking, W. Bennets, Dec. 11 : There is no change since our report of Saturday last.

THE KILNICK, E. Anguak.—S. Dacey, J. Williams, Dec. 6 : Our points o

WHEAL RUBY.—J. Richards, Dec. 3: I have no change to report in the lodestone, but the operation and prospects are without change to notice since our report for the general meeting.

WHEAL RUBY.—J. Richards, Dec. 3: I have no change to report in the lodestone this week, its appearance and the ground are about the same as for some time past except there is a leader of prisms come in on the hanging-wall, which looks more promising, and should it continue will somewhat facilitate our driving so as to

promising, and others it considered unconvincing.

Mines inspected, and confidential reports and surveys made.

SHIPMENTS.		
Week ending Dec. 7, 1872		Tons 12,911
Week ending Dec. 6, 1873		9,138
Decrease		3,773
Total decrease since Dec. 25, 1872		232,096

LEAD.—The position of this metal continues to be one of great
 miness. Under the influence mainly of the political condition of
 ain, which materially affects the production of lead from the
 anish mines, the manufacturers of English pig-lead are able to
 mand a sale at 24*l*. 5*s*. Special brands are quoted 5*s*. higher.

ZINC.—190 tons of Oberhausen have been sold for arrival at 31*l*.
 t, and 140 tons London rolled from 30*l*. 2*s*. 6*d*. to 30*l*. 5*s*.

SPELTER.—There have been but two sales reported during the
 week: 25 tons of "common" Silesian at 25*l*. 17*s*. 6*d*., and two days
 for an equal quantity "ordinary" Silesian at 26*l*. 15*s*.

Great Wheal Vor, 2½ to 3; at the meeting the supplemental accounts showed—Assets (cash in hand), 785*l*. 8*s*. 6*d*.; old materials sold, 228*l*. 7*s*. 6*d*. = 1012*l*. 6*s*.—Due to merchants, 1838*l*. 18*s*. 1*d*.; dues, &c., 548*l*. 7*s*. 1*d*.; showing a balance of liabilities over assets of 1375*l*. to meet which a call of 1477*l*. 10*s*. (5*s*. per share) was made. Bedford, 1*s*. to 1*s*.; Bog, 1½ to 1½; East Caradon, 1 to 1½; East Wheal Grenville, 5*s*. to 10*s*.; Great Lacey, 1*s*. to 1½; Hingston Down, 4*s*. to 4*s*.; Marke Valley, 20*s*. to 25*s*.; Penhalls, 2 to 2½; Pennerley, 1 to 2; Penstruthal, 1*s*. to 2*s*.; Perkins Beach, 10*s*. to 12*s*. 6*d*.; Great West Van, 1½ to 2½; Prince of Wales, 4*s*. to 5*s*.; Providence Mines, 7½ to 8*s*.

Roman Gravel, 17 to 18; Rookhope Valley, 20s. to 25s.; South Corn Brea, 3½ to 3¾; South Condurrow, 4½ to 5½; South Frances, 10 to 12. South Roman Gravel, 19s. to 21s.; at the special meeting, held on Wednesday, the resolution of the general meeting, authorising the issue of 6000 shares at 17. each, with 17. 10s. paid-up, were read and unanimously confirmed. It was understood at the meeting that several applications had been made for shares, but it was anticipated that all would be taken up by those entitled to them. The 20 end of this mine, seems to indicate its approach to a productive lode. West Esclair Llc, 3½ to 3¾; West Gorland, 1½ to 2. Van Consols, 4 to 4½; West Basset, 8½ to 9; West Chiverton, 4½ to 5½; West Frances, 10 to 12; West Godolphin, 2½ to 3; West Seton, 3½ to 3¾; Wheel Kitty (St. Agnes), 9 to 9½; Wheel Margaret, 2½ to 3; Wheel Seton, 17½ to 20; Wheel Ury, 2 to 2½; Rosewall Hill and Ransom United, 18s. to 20s. At the Spear Moor meeting the accounts showed a loss on the six months' working of 251½, and a debit balance of 348½.

At the special meeting of New Lovell, held on Dec. 5, 930 shares were relinquished; but it was resolved to carry on a few tribute pitches in the mine, according to the recommendation of Captain Prisk, who had specially reported upon its prospects, and stated that at present it could be carried on at a monthly loss of about 120½, and a small improvement in one or two points would enable costs to be met. Chontales, 17s. 6d. to 20s.; Eberhardt and Aurora, 4½ to 4¾; Emma, 3 to 3½; Flagstaff, 3½ to 3¾; Sweetland Creek, 5 to 5½. Linars, 3½ to 4½; a dividend of 2s. 6d. per share has been declared. Fortuna, 5½ to 6½; the directors here have declared a dividend of 3s. per share.

The Market for Mine Shares on the Stock Exchange during the week has been moderately active, the fortnightly settlement having interfered with fresh business. Prices in most of the best class of mines remain without change. American descriptions have been neglected, although, as usual at the end of the year, a few purchases have been made to close speculative accounts for the fall.

The Metal Market has been without any special feature, although the increasing cheapness and abundance of money imparts a hardening tendency to value. Copper remains firm at quotations. Tin has improved, and steady at the advance; tin-plates are hardly so active, the advance asked by makers checking business. Spelter in better request. Lead in fair demand.

Richmond Consolidated, 6½ to 7. Cable received on Wednesday—"Week's run, 42,000; mine looking splendid."—McGee. Mr. Conigan has communicated to the board his expectations that the line from Eureka to Pabodas station will be shortly commenced, and probably opened in August next. The importance of the line to the future profitable working of the Richmond Mine is very great, as it would not only greatly reduce existing cost of freight in fuel, but facilitate in many ways the more economical management of the works. A letter from the superintendent, dated Nov. 15, states—"Our developments are still showing well. On measuring the Rossiger incline, yesterday, we find it down 170 ft., in fair ore. It is impossible as yet to estimate correctly the amount of ore developed below the Lizette Tunnel, but it is immense, and the indications are that the ore is increasing in volume as we go down." We learn that a letter was received on the 10th from Mr. Probert, who states—"Mr. Clarence King, as I have already informed you by cable, has re-inspected the mine, and pronounced most favourably as to its conditions and future prospects. He says that it is now the greatest mine he has ever seen except the Comstock, and that there are no indications whatever which would lead him to doubt its permanency. When you bear in mind that Mr. King is well acquainted with all the best mines in this country, you will realise the significance of this statement, that the Richmond is the greatest of them all, always excepting the exceptional Comstock. It is difficult for me to give you thus hurriedly an exact report of his expressions, but I know he was fully satisfied that the mine was better than he had represented it in his report, and that it would realise all his expectations."

Mr. McGee speaks of the ore body now proved below the Lizette Tunnel as "immense," and these recent discoveries must of themselves give a much longer life to the mine than was previously relied on; but if the question of permanency is once fairly settled it cannot fail to increase the market value of the property. The reports appear in another column. New Pacific, 6s. 3d. to 7s. 6d.; the directors have sent out instructions to Mr. Pringle to re-commence work with all possible dispatch.

Colorado Terrible, 4½ to 4¾; the value of this mine is now proved, as the sixth level has been opened, and the vein runs 3 tons per fathom at that depth, and has very much increased in value. There has been considerable excitement in the neighbourhood on the discovery of native silver in the fifth level. We give detailed reports in our other columns. Utah, 1½ to 1¾; we print in another column a long report from Mr. Longmaid, which will be read with interest by all. There is no doubt but that the mine has improved in many places, while the dressing machinery is rapidly drawing towards completion, the superintendent being of opinion that he can start it by the end of the year. Camp Floyd; we have received many letters from shareholders in this company, owing, we presume, to the fact of their being placed on the list of contributors by the official liquidator of the company. Some misapprehension appears to exist with respect to this, but upon enquiry we find that all the shares are fully paid, so that registered members cannot be called upon to pay anything upon their shares. The term "contributory" is used by the Act, and does not necessarily mean that the persons placed on the list can be made to contribute to the company, but the list must be settled so that all persons entitled may share in the distribution of assets. In the case of this company we are informed that every requirement of the Act has been fulfilled, and as they possess a fine mill there is no doubt but that the liquidator will by-and-by have something to divide among the shareholders. Emma shares have declined to 3, 3½, in the absence of confirmatory intelligence of the reported discovery, and there are disquieting statements concerning the management. Flagstaff, 3½ to 3¾; Last Chance, 1½ to 2; Tecoma, 1 to 1½; great dissatisfaction continues to be expressed at the extraordinary and disrespectful manner with which the directors of these three companies deal with their shareholders, while most disconcerting rumours are in circulation as to the legal as well as the financial position of at least one of the mines.

The shares of the Gold-Washing Company remain in good request, although, of course, business is restricted as the year draws to a close. There are indications, however, that the water season is commencing, as one of the companies has received a telegram during the week announcing the resumption of washing. It is doubtful if the rains have steadily commenced, but as all the companies are in readiness to take advantage of the first storms, it cannot be long now before intelligence of a satisfactory character is at hand from "One and All." Blue Tent, 5½ to 5¾; in another column we print a very satisfactory report from Col. Tozer; he is pushing the work on the new ditch to the utmost, carrying on the operations of the company with vigour; he is anticipating a prosperous season. Cedar Creek, 2½ to 2¾; the great item of intelligence this week is a cable message from Mr. Ludlum that he has started washing on one of the claims. We give his telegram in full in another column. Sweetland Creek, 5 to 5½; Mr. G. D. McLean is bringing his various works to a conclusion, and is more than ever satisfied that the cessation from washing has been of incalculable benefit to the company. Birdseye Creek, 2½ to 3½; Mr. Powers is in readiness to start washing, and anticipates satisfactory returns. Holcombe Valley, 3 to 1; the old mill is being put in shape to commence crushing; the mine is also apparently improving in one or two parts, and Mr. Haley begins to speak again of success in more assured tones.

General Brazilian, 1-16 to 3-16; the adjourned general meeting has been convened for Friday, when a proposition is to be submitted for raising further capital.

Great Wheel Vor, 3 to 3½; the quarterly meeting of shareholders, reported elsewhere, was held on Thursday, when a call of 5s. per share was made. The committee have always acted on the very proper system of charging up every item of cost to the day of meeting, and hence the debts appeared as 1375½ over the assets. The call of 5s. per share will produce 1477½ 10s., or about 100% over the debts. The meeting very properly decided on prosecuting the western ground, for, although the lode in that direction has not

yet produced any large quantity of tin, this is to be accounted for by the frequency of small cross-courses, which have disordered the ground for something like 20 fms. It is, however, the opinion of all the mining authorities who have inspected the ground that on going further west the lode is likely to become more productive. This opinion is now endorsed by Capt. J. Thomas, of Dolcoath Mine, whose report was read at the meeting. Great Wheel Vor has held its way now for 14 years without a call, and in that period has divided 88,324½, amongst its shareholders. We commend the shareholders for their pluck in not abandoning so valuable a property on meeting with disappointment, and sincerely trust the call just made may be the means of developing as good a mine as ever in the western ground. The price of tin is now 30s. per ton less than in the beginning of last year, whilst coals are about double the price. This difference to a mine like Great Vor must be very serious. Both are, however, now improving in favour of the mines.

Linars, 3½ to 4½; a dividend of 2s. 6d. per share has been declared. Fortuna, 5½ to 6½; a dividend of 5s. per share has been declared. Van, 3½ to 3¾; the driving of the 30 west has been resumed; the lode at this point is 13 ft. wide, good ore throughout, and is a very favourable indication for the 45 fm. level when under this ground; the 60 east is worth 80½ per cubic fathom; west, 50½ per cubic fathom; about 18 or 20 fathoms more driving will extend this level under the great run of ore ground gone down westward in the bottom of the 45 fm. level; the 75 fm. level cross-cut is close upon the south side of the lode, and gas and water are issuing from the end. Van Consols are firm, at 4 to 4½; the lead is reported to be met with in the 60 fm. level, and the manager states that the mine is improving at all points. Penstruthal shares are in demand, at 19s. 6d. to 21s. 6d. Captain Teague has decided to at once commence operations on the famous old Penstruthal lode. Roman Gravel, 17½ to 17¾; the mine is looking well, and sampled this week 230 tons lead ore.

Dylife, 7 to 7½; the usual report will be seen in another column. The mine is looking well, and will sample 80 tons lead ore next week. Tankerville, 10½ to 10¾; the shares have advanced during the last few days. The mine is improving; the various ends are valued at 700½ per fathom, as will be seen from the reports in another column. The company sold yesterday 70 tons of lead ore at 15½ 2s. 6d. Bog, 1½ to 1¾; the water is gradually declining in the 163 as the shaft is sunk. This will soon unwater the course of ore left in the bottom by the old workers. The shaft is being sunk on the lode, and is producing good ore. Pennerley, 1½ to 2½; the mine has of late much improved, not only in Potter's Pit, where the late discovery still maintains its value, but also in the old portion of the mine, which is looking better than for some time past.

Subjoined are the closing quotations:—Bog, 1½ to 1¾; Carn Brea, 62 to 64; Devon Great Consols, 1 to 1½ prem.; East Van, 2 to 2½; East Lovell, 10½ to 11; East Caradon, 1 to 1½; Great Laxey, 13 to 14; Great Wheel Vor, 3 to 3½; Perkins Beach, 3½ to 3¾; Pennerley, 1½ to 2½; Parys Mountain, 3½ to 4; Roman Gravel, 17 to 18; Tincroft, 40 to 45; Tankerville, 9½ to 10½; Van, 3½ to 3¾; Van Consols, 3½ to 4; West Chiverton, 5 to 5½; West Esclair Llc, 3½ to 3¾; Wheel Grenville, 6½ to 7; West Tankerville, 2 to 2½; Almada, 5½ to 5¾; Birdseye Creek, 2½ to 3½; Cedar Creek, 2½ to 2¾; Colorado Terrible, 4 to 4½; Cape Copper, 27½ to 28½; Chontales, 5s. to 5s. 6d.; Don Pedro, 3½ dis.; Eberhardt and Aurora, 4½ to 4¾; Emma, 3 to 3½; Flagstaff, 3½ to 3¾; Frontino and Bolivia, 3s. to 3s. 6d.; Last Chance, 1½ to 1¾; Malpas, 1 to 1½; New Quebrada, 3½ to 3¾; New Pacific, 6s. 3d. to 7s. 6d.; St. John del Rey, 12½ to 13½; Sweetland Creek, 5 to 5½; San Pedro, 2 to 2½; Sierra Buttes, 2 to 2½; Tecoma, 1 to 1½; Utah, 1½ to 1¾; Rica, ¾ to ¾; Blue Tent, 5½ to 5¾; Holcombe Valley, 3 to 1; Malpas, 1½ to 1¾.

The Cornwall Minerals Railway Company, through Messrs. G. S. Herbert and Son, are inviting subscriptions for 50,000½, in Six per Cent. Preference Shares, of 100½ each, being part of the 275,000½ constituting the entire preference capital, and for the payment of the interest on which there are not earnings available, estimated at 67,875½ per annum, being upwards of three times the amount (22,500½) required. As subscribers will be entitled to the half-year's interest—3% per share—due on Jan. 1, the net price, reckoning the discount on pre-payment, is reduced about 96½ p. per share. The system of railways of this company is of a very important character to West Cornwall, affording most valuable business facilities to the extensive series of mining properties in the district, as by it they are placed in direct railway communication with the port of Newquay on the north and the ports of Par and Fowey on the south, from which places extensive shipments of ore, both coastwise and the foreign trade, are made. In addition to this, by the medium of the Cornwall Minerals Railway the whole of the mining district is brought into direct railway communication, via the Cornwall Railway, with Falmouth and Penzance on the south, as well as with Plymouth, and via the South Devon Railway, and the Bristol and Exeter Railway, with Exeter and Bristol, thereby giving access to the whole of England. The company also possesses special privileges as to the shipments from Fowey Harbour, which is accessible to 1000-ton vessels at all times of the tide, and which will be improved, and by adding extensive wharves, sidings, and other works, adapted to the shipment of at least 2500 tons of material per day estimated to pass over the railway. The company, in addition, leases Newquay Harbour and Par Harbour, thus concentrating in itself all the necessary arrangements for the movement of ores either by water or by railway. Reference to the market position of the preference stock of other railways, certainly not more favourably situated, shows that a very large margin exists for an increase in the value of the Six per Cent. Preference Shares now offered, beyond the price of subscription, so soon as the line is completed, and to trustees and others seeking a thoroughly reliable home investment, free from the risks inseparable from foreign securities of every class, the present is considered to afford a most desirable opportunity. Messrs. Herbert and Son point out that the average value of a six per cent. well secured railway preference stock is over 130½ per 100½ stock (equal to 30% premium per 100½ share), and it may be reasonably anticipated that when the line is opened, which may be expected in the early part of the coming year, these shares will greatly advance in value beyond the price at which they are now offered as the traffic is developed. The prospectus will be found in another column.

The Anglo-Bolivian Silver Mining Company, with a capital of 100,000½, in shares of 5½ each, has been formed to purchase the Prusiana and four other mines in the Caracoles district, Republic of Bolivia, near the Descubridora, and other rich mines. The mines are well situated, and railway accommodation will shortly be provided. The prospectus and detailed information concerning the district will be found in other column.

The Eight per Cent. Western Extension Certificates of the Atlantic and Great Western Railroad Company are 1 to 1½ prem. The First Mortgage Bonds of the New York, Boston and Montreal Railway Company are 7½ to 7¾. Atlantic and Great Western Railroad Leased Lines Rental Trust Bonds are 8½ to 8¾, and the New Issue 80% to 81½. Atlantic and Great Western Third Mortgage, 2½ to 2¾; Preference Stock, 9 to 11; and the Common Stock, 6 to 8. United States Rolling Stock is 2½ to 2¾. The telegram from the 2nd Vice-President Blanchard, head of the freight department of the Erie Railway, New York, states that the November through tonnage equalled last year; the lower rates caused the reduced receipts; eastward rates were advanced on Monday; westward rates will be advanced on Jan. 1; business is improving rapidly. The net earnings of the Chicago and Paducah Railway on the 128 miles open amounted for the month of October to \$20,328. The traffic receipts of the Erie Railway for the fourth week in November, six days to 30th ult., amount to \$359,000, or 71,800½, against \$389,916, or 77,983½, for the corresponding six days in 1872. The Seven per Cent. First Mortgage Bonds of the Uruguay Central and Hygueritas Railway Company of Montevideo are ¾ to 1½ prem.

The transfer-books of the Ebbw Vale Steel, Iron and Coal Company will be closed from Dec. 19 to Dec. 31, when an interim dividend of 5 per cent. per annum will be paid.

THE GORSEDD AND CELYN LEVEL CONSOLIDATED LEAD MINING COMPANY (LIMITED).

The Directors are PREPARED TO RECEIVE APPLICATIONS for the FEW REMAINING SHARES of the LAST ISSUE, at par, £2 fully paid.

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LARGE BED OF ARGENTIFEROUS LEAD FOR SALE, situated in one of the most accessible spots in ITALY, on the banks of Lake Maggiore. Great facilities during the year for working the mines near the railway, and with good carriage roads. All the mechanical preparation in working order; water communication; great metalliferous riches; several veins; works on a large scale. Price £40,000. Apply to A. MAURICE, 13, Tavistock-row, Covent Garden, for full particulars, and where samples can be seen.

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TO BE SOLD, a MAGNETIC IRON ORE MINE, FULLY OPENED, and in PERFECT WORKING ORDER, in the WEST OF ENGLAND. One thousand tons per week can be raised immediately. The lode is a solid mass of iron, 36 ft. wide. No pumping machinery required. Royalty low, the present proprietor retiring from business. For further particulars, apply to Mr. JAMES SAUNDERS, Metal Broker, Wolverhampton.

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PAIR OF VERTICAL WINDING ENGINES, 24 in. cylinders, combined, 1050
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Who will furnish the fullest information, and to probable investors furnish letters of introduction to view the properties.

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Number during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

UTILISING BLAST-FURNACE SLAG.—"R. M." (Sheffield).—We believe Mr. Hiram C. Coulthard, C.E., of Duke-street, Westminster, proposed the utilisation of blast-furnace slag in the manner described. He proposed to granulate the slag by letting it fall into water, and then use it as a surface for asphaltic paving. The granulated slag was, of course, to be applied whilst the asphalt was still soft. This combination is not used at Onsbrough; the slag is simply reduced into grains by being made to fall, while hot, into water from a height, and then used as railway ballast, or to mix with concrete. When, however, it contains sufficient alumina it is manufactured into alum.

THE BRITISH STEEL TRADE.—"D. L." (Southwark).—The useful effect of Henry Bessemer's labours as an inventor cannot be better shown than by referring to the increase in the annual production of steel since he read his paper at Cheltenham, in 1856. Before his invention was brought into use our annual make of steel scarcely exceeded 50,000 tons; it is now nearly 500,000 tons.

COPPER SCHISTS.—I am desirous to learn if copper schists, or shale, are treated in the United Kingdom for the ores they contain, although of low percentage. Pembroke shire abounds in such strata. If some of your numerous readers will inform me if such copper schists are so treated I shall feel obliged.—*ENQUIRE.*

GREAT WEST CHIVERTON.—The directors of this mine have as yet given no information to the shareholders, although solicited to do so. The shareholders have surely a right to know what has been accomplished with their money. This mine was brought out with a great flourish of trumpets, but where are the trumpeters now? If the mine is in a state of collapse, why do not the directors, like honourable men of business, call a meeting of the shareholders at the London office, and, if requisite, pass a resolution to have the company voluntarily wound-up, and the assets, if any, returned to the shareholders. It will be better for all parties to make a clean breast of it with regard to the state of the mine. Under these circumstances directors, by acting otherwise, do much damage to the interests of legitimate mining.—*SHAREHOLDER.*

POLARISCOPE.—I should be very glad if some correspondent would kindly tell me the name of any treatise or handbook (of an inexpensive character) to the use of the polariscope, and give an idea of the price of such an instrument for chemical investigation.—*GLAMORGAN.*

PRACTICAL MINING—AN INCH OF WATER.—D. R. (Brighton).—The miners' inch of water is a stream 1 in. thick, and would probably be about 20,000 gallons. The average price at the mines is about 10 cents, or 5d. It is only miners, however, who usually get the water at that price. For ordinary manufacturing purposes many are paying in the Western States at the rate of 3s. per 1000, and for domestic purposes as much as 7s. 6d. per 1000 gallons is sometimes paid.

ANTIMONY.—"S. A." (City).—Regulus of antimony is worth about 55s. f.o.b. in London.

NEW EAST LOVELL.—I am a shareholder in this mine, which is situated in the parish of Constantine, and was considered to be promising for tin, but it so long since I saw any notice of it that I am in doubt as to whether it be still in operation. Will any of your correspondents kindly give me any information concerning it?—*DOUBTFUL.*

AUSTRALIAN COPPER.—"B. G. and Co." (New Broad-street).—The English and Australian Copper Company, 17, Gracechurch-street, are the principal producers and importers of Burra Burra and Wollacott copper.

WHAT ARE WALLSEND COALS.—In consequence of certain coal dealers being brought before the magistrates for selling as "Wallsend" coal of other descriptions, Messrs. Cockrell have taken the opportunity to explain that the term "Wallsend" was originally descriptive of the coal drawn from the spot where the old Roman wall ends on the northern side of the Tyne. For at least 30 years past the term "best Wallsend" has been applied to certain coals ranking as the most valuable for household purposes, and is, in that respect, as distinctive a term now as it ever was. Anyone ordering "best Wallsend" should be secure of obtaining Lambton's, Hetton's, Original Hartlepool, Tees, or Wallsend coals ranking with these, and certified as such by the factor on the London market.

LANARVET.—We readily comply with the request of Mr. Alfred Harper, of Lanbrynmair, that we should state that he is not the author of the letter signed "Pedestrian" (a name *de plume*, used by him in a series of interesting communications, published in the Journal some time since), which appeared in the Supplement to the Mining Journal of Nov. 29. Mr. Harper knows nothing whatever of the Lanarvet Mine, nor of the writer of the letter.

WHEAL MARY—CHANGE OF MANAGEMENT.—The letter of the Chairman, Mr. W. J. Thompson, was received too late for insertion.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

AMERICAN SUBSCRIBERS.—In reply to several enquiries, it may be stated that subscribers in the United States can be supplied with the Mining Journal, post free, at the price of \$2 gold per annum, payable in advance, by remitting to Mr. D. Van Nostrand, publisher, and importer of scientific books, &c., Murray-street, New York; or, direct to our Office, 25, Fleet-street, E.C.

RE-POSTED "MINING JOURNALS."—Many of our subscribers who re-post the Mining Journal to their friends subject them to a fine of 4d. per copy on delivery through intention to the Post-office regulations. If the halfpenny adhesive stamp be affixed partly on the wrapper and partly on the paper the packet is considered "closed against inspection," and surcharged accordingly. If the newspaper cannot be slipped out of the wrapper if required for inspection, the newspaper privilege is lost.

THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, DECEMBER 13, 1873.

SAVING LIFE AFTER EXPLOSIONS—THE AEROPHORE.

Save when valuable property, or invaluable lives, or both, have been jeopardised by one of the many disasters which have of late years made the South Lancashire coal field so notorious, there has probably never been seen on the bank of a Wigan colliery such an assembly of experts in mining as that which took place on Monday last. The scene of the gathering was the Barley Brook Colliery, belonging to Messrs. Pearson and Knowles, and situate close to the main line of the London and North Western Railway, and in the immediate neighbourhood of the collieries of the Messrs. Turner, at whose pits occurred the accident which forms the latest addition to the long list of casualties in this neighbourhood. The object of the meeting was to witness the first experiments in England with the aerophore, a machine which its inventor, M. DENAYROUZE, of Paris, claims will enable miners to penetrate to a great distance into choke or fire damp, to remain there several hours, to carry their lighted lamps without danger, and to have free use of their arms.

The experiments were under the direction of Mr. Robert Applegarth, of London, English representative of the patentee, and M. Guichard, from the establishment, in Paris, of M. Denayrouze, and to these gentlemen Messrs. Pearson and Knowles had kindly granted the use of their premises at Barley Brook. The gathering possessed more than a mere local interest, for not only had Mr. Applegarth issued a large number of invitations, but the Lancashire and Cheshire Coal Association had, through its secretary (Mr. Pease), brought the matter prominently before the members of the coal trade generally. Unfortunately, Mr. Bell, her Majesty's Inspector for the district, was through indisposition unable to be present, but the body to which he belongs was represented by the veteran who by seniority stands at the head of the list of Inspectors—Mr. Joseph Dickinson, F.G.S., than whom probably no living man could bring to bear so wide and varied an experience in mining matters—and his assistant, Mr. J. S. Martin. Amongst those also present were the following, but it was impossible to obtain anything like a complete list; in many cases colliery owners had sent as their representatives their managers, underlookers, or some other official whose intensely practical knowledge made them the most capable of forming an opinion as to the value of the invention:—Mr. Jonathan Lamb, deputy-mayor of the borough; Mr. Thomas Southworth, Hindley Green Collieries; Mr. William Lamb, Newtown Collieries; Mr. William Bryham, Douglas Bank; Mr. John Cross, Gidlow; Mr. W. Barratt and Mr. J. Thompson, Norley; Mr. Diggle, West Leigh; Mr. Tonge, Hulton; Mr. C. G. Jackson, Wigan Coal and Iron Company; Mr. Peter Pickup, Blackburn; Mr. R. Betley, F.G.S., analyst to the Corporation; Mr. Livesey, Oldham; Mr. Fisher, Bradley Hall; Mr. Wm. Pickard, miners' agent for the district. Mr. J. E. Pearson and Mr. T. Clarke, manager, represented the firm who owned the colliery.

The apparatus is not the result of the first attempt to deal with this class of danger in mines. Twelve years ago M. Rouquayrol, engineer of the mines at Firney, submitted to a committee appointed by the Société Minérale of St. Etienne, an apparatus which obtained from the society a silver medal, but it was not wholly satisfactory, and since its appearance not much has been heard of it, though several schemes have been mooted for meeting the requirements this was intended to fill. M. Denayrouze's apparatus is of two kinds, one high pressure and the other low. That in use on Monday in the principal experiments was on the high-pressure principle, and

its general features of construction may be thus briefly described:—A number of portable cylinders, as large or as small as may be desired, are charged with compressed air. In those used on Monday there was a pressure of about 16 atmospheres, and this could have been increased. These cylinders are lowered with the workman into the shaft. Communicating with them is a long flexible tube about an inch in diameter, and so strong that it can hardly by any possibility be damaged. The person descending the mine has previously taken one end of this tube in his mouth, and has closed his nostrils with a small "nipper," and placed a pair of what may be called hermetically sealed spectacles over his eyes. Thus prepared he can breathe only through the mouthpiece and tube communicating with the reserved air in the cylinders. The cylinders become stationary at the bottom of the workings, but the worker may move away from them to a distance of one, two, or three hundred yards, winding out hose as he moves. The tubing is, of course, so arranged that its length adds nothing to its weight, so far as the person using it is concerned. This is a very rough outline of an invention which in its details seems calculated to meet all the more obvious objections that may have already suggested themselves to the reader. If the compressed air were suffered to reach the operator without any intermediate contrivance, and at its own high pressure, he would at once be choked. It is accordingly passed through another part of the apparatus, affixed to his back, which by a mechanical contrivance, which is really the secret of the whole invention, so regulates the pressure that the air reaches him very much in the condition of that which he breathes above ground. But some breathe more heavily than others; the mouthpiece is accordingly so constructed as to enable a man to take in just as much or as little air as he may want. So far, however, we have only provided for inhalation. The process of exhalation is accomplished by means of a small aperture in the tube at about a couple of feet from the mouth. The breath may pass out of this and mingle with the foul gases beyond, but nothing can find its way back again through the same opening. Another arrangement of valves and a tube supplies a continuous current of air to the lamp which the miner carries in his hand, and enables it to burn brightly where no other lamp could live.

The scene of Monday's experiments was a small field close to the shaft of the pit. The operators would have been willing to enter the pit, but naturally it was not considered advisable to create artificial perils. In addition to the gentlemen present by invitation a number of miners soon joined them, and so completed the representative character of the little crowd. And as the throng moved out of the field towards a small public-house on the high road, where a preliminary experiment was to take place, the collier's wife and the collier's baby pressed forward with the rest to gratify a very legitimate curiosity. The lamp of M. Denayrouze's invention was first tried by itself, and the operators—M. Guichard and Mr. R. Applegarth—conducted this experiment near a house, in order to obtain a supply of common gas. Their object was to show that the lamp would burn freely and without danger amidst explosive gas. The lamp was supplied with the petroleum in ordinary use. It was lighted, placed in a shallow dish of water, and covered with a large glass vessel, which also enclosed the end of a gas tube communicating with the main inside the house. The gas was then turned on, and it poured in freely for some minutes until—as could be seen by the bubbling of the water—it drove all, or nearly all, the air out of the glass vessel. The lamp meanwhile drawing its supply of air from a tube in communication with one of the cylinders, was seen to be burning brightly. In fact, the flame was just as clear after the glass vessel was removed as before it was put on, and the gas in one case and the air in another by which the lamp was environed seemed to have no effect upon it whatever, its own air being conveyed direct from the cylinder to the interior of the wire casing which held the flame.

The party then returned to the field to try the apparatus in its complete form. Hitherto there had been little or no danger in the experiment. If the lamp had not been properly supplied with air it certainly might have caused the gas to explode, and have turned the glass vessel into a bombshell; but the operators professed to have no fears on this point, and their confidence was certainly justified by the result. In what was about to be done there was at least greater apparent risk. The colliery managers had been asked to fill a small outbuilding set apart for the purpose with the most noxious gas they could make. They had accordingly burnt charcoal and sulphur together, until they produced a vapour of sulphurous acid, in which it was alleged that no air-breathing creature could long exist. By looking through a small window the place could be seen to be pretty full of this compound. Mr. Applegarth was the first to venture in. Taking off his coat, he put on a strongly-made jacket of webbing, to the back of which were attached the two moderating valves, and, indeed, all the machinery of this part of the apparatus, with the ends of the tubes communicating with the cylinders. This jacket was firmly fastened round the body, with straps buckling in front. The "nippers" were then affixed to the nose, and the "goggles," with their rims of inflated india-rubber made to exclude all gas, were placed over the eyes. The lamp was at the same time lighted and attached. The word "all ready" being given, the door was opened. The spectators stepped back to avoid the fumes, which were noxious even in the open air, and the operator, carrying an unfortunate kitten in his hand, entered the hut, and was shut in. The tube trailing behind through an opening which had been made in the door of a size just sufficient to admit of its passage. Some carpenter's tools had been left in the little building, and in another moment Mr. Applegarth was heard at work with them, his object being to show that he could not only live, but keep up a considerable amount of activity—as much, in fact, as would enable a man to do anything that was necessary in the pit itself. The task he had set himself was the making of a box, with hinges and fastening complete, out of the rough planking that lay on the floor. While he sawed and hammered a strange crowd pushed and struggled outside the little window for a sight of him. The pitmen, of course, succeeded best in this enterprise, but some pit lasses, in the costume peculiar to the district, were in the next order of merit. The comments of these people were not without interest for listeners who were out of danger, though they might not have given equal satisfaction to the workman inside. According to one of these, Mr. Applegarth was thoughtfully making himself a coffin in view of the almost certain issue of the experiment. According to another, the box was only to serve for a "coffin for t'cat." At length, after the sawing and hammering had lasted some 22 minutes, the operator held up the finished piece of work, and, as others were to succeed him, and time was of some importance, the door was opened and he walked out. His face was as wet with perspiration as though it had been dipped in water; he had in effect been in a very powerful vapour bath, for the sulphur and charcoal were burning and throwing off their fumes all the while he was at work. He looked no more fatigued than any man might be after nearly half-an-hour's steaming, and there were no signs that he had been in the least degree affected by the gases as such. He breathed freely also when the mouthpiece was removed, and at once bestirred himself in getting the machine ready for the next operator. The hapless kitten was then brought out. It was not quite dead, its position on the floor, and in the direct line of draught from the lower part of the door, having aided it in the fight for life, but it did not linger long. It was laid on the grass outside the hut, and its last struggles were watched by the crowd of colliers apparently not without sympathy, as though the mode of its death gave it a claim on the compassion of men themselves subject to the same fate.

M. Guichard then put on the apparatus, and ran about the field to show the ease with which a man might train the tubing after him over obstacles of no common kind. For this purpose, starting from the stationary cylinders, he first mounted one of the great heaps of coal, some 30 yards away, ran swiftly down on the other side, and turning the base of the hill, came back to the place whence he started, all the time keeping in communication with the cylinders, and, indeed, drawing his supply of air from them. He next worked as a rescuer by prevailing on one gentleman of no slight proportions to lie down, and then dragging him for some little distance along the grass. These experiments showed pretty clearly that the tubing

was not easily put out of order, and upon its integrity, of course, the practical value of the invention mainly depends. If the hose were made of india-rubber only it might double in such a manner when carried round a corner as to cut off the supply of air. Composed as it is of india-rubber, strengthened with strong binding wire, any accident of this sort seems to be well nigh impossible. The test was when Mr. Applegarth was depending for his life on the supply of air which it conveyed to him. M. Guichard afterwards entered the hut where the fire of charcoal and sulphur was still burning. He did not do any handiwork, but he showed his vitality quite as effectually by shouting so that he could be distinctly heard outside the window. This was peculiarly hazardous. The operator had first to remove the tube from his mouth, and to take care not to draw breath until he had replaced it, for had he done so he would, in all probability, have been a lost man. One object in withdrawing the tube was to show that it might be made temporarily available for the recovery of the exhausted person whom the operator is supposed to have found in the cutting. The air from without, of course, still streams through the aperture, and it could be directed to the sufferer's mouth and nostrils for just as long as the operator might be able to hold his own breath.

The next experiments were the more interesting because he who undertook them was well known to everyone present. Mr. Pickard, the men's agent, was the first English miner to test the apparatus, and this he did in a very practical way. After having spent some time in the building containing the noxious vapour he came out, and to show that his supply of air had been ample he ran a considerable distance without removing the mouth-piece from his lips, and showed also by lifting two boys that his energies were by no means impaired, and in other ways, quite intelligible to the men who knew the kind of operations which would be necessary below ground, manifested its unlimited applicability. Mr. Applegarth afterwards explained the machine at considerable length, and illustrated his remarks by pulling to pieces the apparatus which had been in use.

The experiments were exceedingly satisfactory throughout, and the representatives of the inventors were heartily congratulated on their success, and thanked for their courtesy to those who had come to witness the experiments. Amongst the suggestions which were the result of the experiment was one that the Coalowners' Association should provide a number of aerophores, and that these should be stationed in convenient places and kept in order and in a condition ready for instant use by men whose special work should be to look after them. Up to the very close of the experiments the utmost interest was manifested in them, and it was noticeable that in nearly all the little groups into which the company occasionally got formed someone was able to tell of his own experience how such an apparatus in times past might have saved men whose lives were lost because they could not be reached, and might have prevented incalculable loss of property.

COAL-CUTTING MACHINERY.

For some years past we have strongly advocated the adoption of mechanical means in our mines for detaching the coal from the other strata above it, and we have frequently expressed our regret that colliery owners did not give that attention to the subject which its importance seemed to demand. This may have arisen at one time from the fear that any attempt to supersede the work of the miner by machinery would be met by a combined and powerful resistance on the part of the men, as was formerly the case in other businesses. This may have been assumed by many who believed that the colliers had not emerged from the proverbial ignorance which attached to their body up to a comparatively recent period, and that they were still the same uncouth, untractable semi-savages they were painted 20 years ago. But this, as a rule, is not now the case. There are, it is true, many brutal and ignorant, but the great majority of the hardy underground toilers now know the advantages of education to themselves and their children, and are profiting by it. Not only are they now giving their children a training in the well-known "three R's," but in the higher branches as well, for very recently we were informed by the President of the South Yorkshire Miners' Association—by the way, one of the best organised Unions in the kingdom—that in his own little village, at no great distance from Sheffield, a visitor would find from 40 to 50 pianofortes and harmoniums belonging to their small community, and with persons capable of playing them well. If, then, the miners' children are brought up in such a manner, we may well feel assured that as they advance in years they will only be too thankful to find appliances placed within their reach by which the most fatiguing and dangerous work of the miner (as at present) is done away with. We also know that the present race of miners, excepting of course those who are thoroughly saturated with ignorance, would hail with the greatest satisfaction the adoption of machinery that would not only lessen their labour in cutting coal, but would free them from the constant risks they run of being buried by a "fall" of roof or coal, by which more persons are killed in our mines than from any other cause. Indeed, on several occasions we have seen where machines have been introduced, either for the purpose of testing them or for permanent working, the men have shown every disposition to aid in every way in getting them into operation. Therefore, we feel certain that the miners will now in no way oppose their introduction, should the colliery owners see fit to take advantage of the various machines now being successfully worked at a few mines. This, we believe, they will before very long be compelled to do, and for obvious reasons. In the first place, it is patent to all persons interested in coal mining that at the present time there is a great scarcity of colliers in almost all our colliery districts, whilst the effect of recent legislation has had a decided tendency to lessen rather than increase the number. Such being the actual state of things now existing, we may well ask what will be the position of affairs in the course of a couple of years or so, when a very large number of most extensive collieries will be opened out in all parts of England and Wales, and when thousands of hands will be required to work them? If we take the number of hands at present employed in connection with our coal mines at 418,000, and assuming the increased production of the new collieries now being opened out and those being extended in 1875 to be 12,000,000 tons—certainly a low estimate—we should require, according to the present rate of individual production, an addition of more than 40,000 persons to man all our mines even as they now are. Now, we have no hesitation in saying that it would be impossible under any circumstances to get anything like that number. Nothing, then, will be left for many of the owners of the new collieries but a resort to machinery. Once that is done other colliery proprietors will be compelled to do the same, or they will be placed at a very great disadvantage, seeing that a machine can do as much work in a given time as a dozen colliers, and, probably, at half the cost of the manual labour.

Some such views as the above appear to have suddenly dawned upon a body of practical men in the West Riding of Yorkshire, where machinery for cutting coal may be said to have been first brought to light. The Midland Institute of Mining Engineers, at their monthly meeting, held at Barnsley on the 3rd inst., no doubt seeing that mechanical means for getting coal would before long be a positive necessity, took the question up in a practical manner. After discussing the matter they appointed a committee "to enquire into the merits of the various coal-cutting machines," and to report thereon to a future meeting. It was also agreed that the committee should have power to expend a sum of money not exceeding £50, whilst prosecuting their enquiries. As the committee will, doubtless, be composed of both mining and mechanical engineers we look forward with much interest to the result of their labours, for the field is not only an extensive one, but the enquiry itself cannot but prove highly interesting, whilst its bearing on the future of the coal trade cannot be estimated. Having seen several of the best-known machines at work, we believe that the committee will be able to give an impetus to the adoption of coal-cutting machinery by colliery proprietors such as it has not yet received, and at the same time help to recompense inventors for the toil of years and the thousands of pounds they have expended in perfecting machinery for economically and expeditiously raising the fuel on which nearly

all our most important industries depend—our wealth at home, our power and prestige abroad.

At the present time we believe there are not more than a score of machines in operation at the collieries throughout the kingdom. Those actually at work, however, may be divided into two classes—the pick, which imitates the action of the collier in cutting coal; and the wheel and the roller. The former system, brought out in Leeds several years ago, has been greatly improved by the present patentees—Messrs. W. and S. Firth—and several of the machines have for some years been cutting the seams of coal at the West Ardsley Collieries, between Wakefield and Leeds. Similar machines have also been made and patented by Mr. Jones, of Blaina, and Messrs. Farrar and Booth, of Barnsley, but we believe that the inventions of those gentlemen are not now in use. There are several patents for machines consisting of a series of cutters mounted on a periphery or a radial arm. At the present time they appear to be making considerable headway, for there are orders for them not only for Lancashire and Yorkshire but also for Russia. Amongst the inventors who have given a great deal of time and expended considerable capital in perfecting this description of machinery we cannot overlook the indefatigable Mr. Hurd, who, in conjunction with the late Mr. E. Simpson (one of the proprietors of the Land Hill Colliery) recently brought out one which has been most successfully tested in the Wigan district, and found capable of cutting 30 yards of coal in the hour to a depth of more than 3 ft. Messrs. GILLOT and COPELEY, of Barnsley, have also been successful in inventing a machine—consisting of a series of cutters mounted on a wheel, and which has been tried at the Wharfedale Silkstone Colliery, near Sheffield, as well as at other places, and been pronounced a decided success. Messrs. WILSON and BARKER, of Manchester, have also a rotary machine, which is highly spoken of, and, like the others, can be worked in a very thin seam of coal, cutting something like 30 yards an hour to a depth of 3 ft., with a very moderate amount of air pressure. Considerable prominence has of late been given to the machine brought out under the auspices of the Messrs. BAIRD, of Gartsherrie, and patented by Mr. GLEDHILL. It has lately been tried in the North of England, and has done all that could be desired, so much so that we understand there are several orders in hand for them. The machines are calculated to cut from 300 to 400 ft. of coal to a depth of 3 ft. in an ordinary shift. "The Universal Coal-Cutting Machine" of Mr. W. J. CLAPP, of Nant-y-Glo, recently noticed in the *Mining Journal*, may be exceptionally good in every respect, but we have considered it desirable to mention those inventions only that have been in actual work, for we know from experience that however admirable and feasible a piece of mechanism may be on paper, it very often fails to realise the expectations formed of it when put to a practical test.

With the machines we have alluded to the Committee of the Midland Institute of Mining Engineers will, in all probability, confine their observations and enquiry; any one of them, we believe, will be found of inestimable value to the colliery proprietor, if only as regards the economising of labour and the increased quantity of marketable coal they will produce. They will also make the colliery owner more independent of the workmen and boys than he now is. But there will still be plenty to do for the miners, owing to the increased out-put, the fixing of props, and other necessary work, should coal-cutting machines be generally adopted. But, more valuable than all, those who are obliged to look after those vast subterranean excavations miles underground, in places where the light of heaven never penetrates, will find that they will be more secure from accidents than ever they were before. The public, also, cannot fail to be benefited—more particularly our manufacturers—by the increased production of coal. We, consequently, look forward with interest to the report of the mining engineers' committee, believing that it cannot fail to be the prelude to a new era in the history of the coal trade—an era advantageous to the whole community, and calculated more particularly to materially increase our manufactures, and add to the comfort of the poorest of our rapidly increasing population.

INSPECTION OF MINES.

It is now an admitted fact that the examination of mines by the Government Inspectors since their appointment has been a sheer impossibility, whilst the word Inspector, in its literal sense, has been a misnomer. The Inspectors, indeed, have only been able to visit a colliery when they have been specially sent for, or after the occurrence of some fatal accident, when their advice has been asked for the purpose of securing the stable after the steel had been stolen beyond the power of redemption. Many persons laboured under the impression that the Inspectors were first appointed because it was believed they would be able to prevent accidents in mines, instead of becoming the mere recorders of them in yearly reports. But such has not been the case. Yet there is no saying how many lives, and how much valuable property, might have been saved had there been a virtual inspection by properly qualified persons during the last 20 years, had it only been to see that the ventilation of mines was properly conducted, and the rules efficiently carried out. But this could not be done, seeing that some of the Inspectors had more than 400 collieries in their districts. But that a system of inspection by which mines could be visited from time to time by properly qualified persons appointed by Government would be most beneficial, was energetically urged on the part of the working colliers, and the result was that last year power was given to the Home Secretary for the time being to appoint Inspectors in addition to those who had been previously appointed to the charge of districts. These sub-Inspectors, as they may be termed, were looked upon as likely to see more after the collieries, and that the provisions of the Act of Parliament were carried out to them in their full intent. Already several of them have been appointed; and, judging from what they have already done within a very short period, we believe that with a much larger addition to their number, greater safety will be secured to those engaged either at the top or at the bottom of our mines. There is, consequently, no reason why inspection of mines should not be a reality, instead of a great sham, as it has been hitherto. That increased inspection means increased safety we feel convinced, and in proof of which we will draw attention to an important case that was heard before the sitting magistrates at Chesterfield a few days ago. The person summoned was Mr. HENRY WALTERS, the manager of the Old Brampton Collieries, belonging to Mr. R. WARD JACKSON, M.P. The first charge was for not having published the Special Rules in a conspicuous place, so that they could be seen by the workmen, as required by the Act of Parliament.

The information was laid by Mr. DICKINSON, the Assistant Inspector for Derbyshire, who, it appears, had visited the colliery on Nov. 10, and found things in anything but the state they ought to have been in. For instance, whilst looking in the engine-house he found that some of the machinery had not been fenced off, so that a person might easily be injured by it. For this offence the manager was also summoned, and was convicted on both charges. A third information laid against Mr. WALTERS shows how essential to the safety of the workpeople is a complete system of inspection—the casual visits to a colliery without giving notice. The charge was for allowing gunpowder to be taken down in a canister, instead of in cartridges, as required by the Act, after there had been an explosion in the place. The charge appears to have been admitted; and the manager, in answer to Mr. DICKINSON, said he was not aware that it was in contravention of the law. Yet the statute is as clear as it can be, for it distinctly states that powder shall only be taken down in cartridges in any mine "during three months after any inflammable gas has been found in any mine." Now, if a colliery manager is ignorant of a most important clause in the Act of Parliament, and one in which the safety of all persons working in the pit is concerned, what can we expect from ordinary miners? Surely this in itself shows that constant inspection, independent of the colliery officials, is the only safeguard against the recklessness of workmen and subordinates, and the ignorance of some managers. True it is that Mr. WALTERS had to pay nearly 18s. for not being willing or able to carry out the Act of Parliament; but what guarantee is there that a similar state of things may not be found at the same colliery a month hence, or at scores of places even at the present moment? The value of actual in-

spection of collieries as a certain means of safety, we think, has been forcibly illustrated by about the first case that has been heard at the instance of the recently-appointed Sub-Inspector of Mines.

EXPORTS OF PIG-IRON.—The exports of pig-iron from the United Kingdom in October were 99,479 tons, as compared with 101,607 tons in October, 1872, and 116,878 tons in October, 1871. Germany received the largest share of our pig-iron exports in November—viz., 20,852 tons. The aggregate exports of pig-iron from the United Kingdom in the first 10 months of this year were 996,114 tons, against 1,140,043 tons in the corresponding period of 1872, and 990,911 tons in the corresponding period of 1871. In the total representing this year's exports Germany figured for 230,707 tons, Holland for 284,581 tons, France for 79,072 tons, and the United States for 96,395 tons. The exports have increased this year to Holland and France, but they have decreased to Germany and the United States. The value of the pig-iron exported from the United Kingdom in October was 616,379s., as compared with 598,071s. in October, 1872, and 366,370s. in October, 1871; and in the 10 months ending Oct. 31, this year, 6,211,413s., as compared with 5,616,965s. in the corresponding period of 1872, and 2,750,289s. in 1871.

THE SANDWELL PARK COLLIERY.—The progress making with the important exploratory works which have been so long going on here appear to be in every way satisfactory, for it was stated at the meeting just held that the shaft had now reached a depth of 307 yards, and it is believed that only from 10 to 12 yards further will have to be sunk before reaching the seam of coal. The increase in cost in working which has taken place has, however, been enormous; sinkers' wages have advanced 117 per cent.; winding engineers' wages, 87 per cent.; bricks, 44 per cent.; lime, 46 per cent.; timber, 13 per cent.; coal, 116 per cent.; slack, 112 per cent.; bar-iron, 58 per cent. The existing capital of the company was not sufficient to carry out the working, and, consequently, the directors thought it right to convene a meeting of the proprietors to sanction a further increase of capital. The proprietors, recognising the necessity of adopting the course suggested, resolved that the capital of the company should be increased from 20,000l. to 30,000l., and that the additional capital be divided into 200 shares of 50l. each, to be called B shares, the original shares being called A shares; that such B shares be issued at such times and in such manner as the directors may determine, but that every member should have the option of taking one B share for every A share held by him; that, in respect of such B shares, the sum of 10l. per share shall be payable on allotment, and further calls may be made from time to time at the discretion of the directors, but that no call shall exceed 10l. per share, or be made payable at an earlier date than three months from the date of the preceding payment.

MINES DRAINAGE ENQUIRY AT WOLVERHAMPTON.—Referring to the area to be brought under the Mines Drainage scheme, Mr. Dowdeswell, the legal arbitrator, reminded certain of the colliery lessees who objected to the inclusion of their district in the drainage area, that with two horses they were doing the work of one, and the public bore the burden. Mr. Vernon said that upon his 2000 acres now let he should lose under the present system coal now worth about a million and three quarters sterling. Before deciding, the Commissioners will go over the district north of the Bentley fault.

THE AMERICAN IRON TRADE.—Statistics compiled by the American Iron and Steel Association throw some valuable light upon the decided progress which American metallurgy has been making of late years in the production of pig-iron in the American Union in the 20 years ending with 1873 inclusive. The figures, it should be premised, are brought down to November in each year, so that the return for 1873 extends from December, 1872, to November, 1873:—

1854	Tons 736,218	1864	Tons 1,135,096
1855	784,178	1865	931,582
1856	833,137	1866	1,350,343
1857	798,157	1867	1,461,626
1858	705,994	1868	1,603,090
1859	840,627	1869	1,916,641
1860	919,770	1870	1,865,000
1861	731,744	1871	1,912,608
1862	787,662	1872	2,830,070
1863	947,604	1873	2,995,434

The principal proportion of this pig was made with anthracite coal, but a considerable quantity was also made with bituminous coal and coke. The estimated production of iron and steel rails in the United States in 1873 was 850,000 tons, as compared with 947,992 tons in 1872. The construction of railroads has, in fact, received a decided check in the United States. Thus it is computed that only 3000 miles of new track will be completed this year, as compared with 6427 miles in 1872, and 7770 miles in 1871. The total probable railroad construction of 1874 is estimated at 3000 miles.

MINING IN CANADA.—The Canadian Copper Pyrites and Chemical Company have just received a large consignment of rich ore from their mines in Canada, and have sold the same on favourable terms. Owing to the early closing of the shipping season they were unable to get away more mineral last summer, but will be in a position to make very considerable shipments next spring as soon as the season opens. The output from their mines shows a large and steady improvement, both as regards quantity and quality, several important discoveries of new lodes having recently been made, and there is no doubt they will be able to make large and regular shipments of rich ore to this country, and still leave more than sufficient ore of the second class for the extracting works. These have been designed to consume fully 1300 tons of ore per month, and although the foundations were not laid till the beginning of August last, a portion of them are already completed, and in actual operation, and the remainder is rapidly approaching completion. Every precaution has been taken, by the erection of sheds and otherwise, to prevent any interruption of the processes during the winter.

THE MINES OF ASHANTEE.—In the Supplement to this week's *Mining Journal* we publish a long and interesting description of the Gold Coast and its mines, &c., by Mr. GEO. PRACOCK, F.R.G.S. The paper is a really creditably compiled historical sketch of all that is known of the country of the Ashantees from Biblical times to the present, accompanied by plausible and ingenious suggestions by way of elucidation. He proposes, in conclusion, that, having succeeded in subduing the local potentates, we should promote civilisation by the endowment of public schools, like those at Lagos and other parts of civilised Africa; next, annul their stupid superstitions as to the sacred gold mines and evil genii in mines, inculcate industry, teach purely unsectarian and natural religion, and prevent the indiscriminate importation of instruments of slaughter, promoting, instead, the introduction of the miners' pick, the shovel, and the hoe.

COLORADO SILVER MINES—THE TERRIBLE LODGE.—There never was a time, writes our esteemed correspondent, Prof. C. S. Richardson, as the result of his inspection on Nov. 7, when this valuable mine presented such a splendid appearance as it does now, and he has favoured us with an elaborate descriptive account of the mine, with sections of the lode, &c., which we shall publish in next week's Supplement to the *Mining Journal*. The diagrams embrace a section of about 8 ft. of the lode, as seen on the west side at the bottom of the shaft—a cross section of the lode in the back now in working near the engine-shaft, and producing 2½ tons per fathom of very fine close-grained bright ore rich in silver; a section of arborescent formation between the shaft and the first winze, where the vein averages 7 in. of solid ore, one-half of which is first-class, or ore running from 450 to 650 ozs. of silver, and carrying but little zinc, blende with it, and a section of the breast at the end of the level. There has just been found in the fifth level west, just past the swell in the footwall, one of the finest specimens of wire silver ever seen in Colorado. The information will be of peculiar interest to the shareholders.

IRON MINING IN NEW SOUTH WALES.—Advices from Sydney (Nov. 27) state that a recent landslide near the Fitzroy Ironworks has laid bare two valuable seams of bituminous coal, not known to exist in that locality, one 17 and the other 6 ft. thick, with a parting of sandstone between about 4 ft. The manager reports that the

works are ready to start, and as soon as this coal can be utilised (by means of the tramway, which by this time will be nearly completed) the works will be in full operation.

NEW QUEBRADA.—Samples of the ores from the mines having been sent for at the request of the recently appointed consulting engineer, Mr. David Forbes, F.R.S., a box of samples indiscriminately selected at the mines has been received and examined by him. He pronounces the result to be most satisfactory. The samples are deposited at the company's offices for the inspection of shareholders.

REPORT FROM NORTH WALES.

Ruabon, Dec. 11.—It is satisfactory to note that the collieries of this district have continued in fair activity during the past two months, notwithstanding the tendency here and there to hold orders back from putting them on the market. The requirements of wholesale consumers in its barest form have proved sufficient to sustain operations at the coal industries without causing them to reduce labour, which under other circumstances it might have been deemed necessary to do. The present season is usually a brisk one in the trade, but the weather setting in fair encouraged retail dealers to believe that a reduction in prices was imminent, and in order to hasten so agreeable a change they are reducing their demand, and, in fact, are trying to do without coal altogether. If it be possible for the house trade really to continue to be diminished in this way it will eventually exercise an influence on quotations. But up to the present time the markets on which the mining districts rely are doubly available by the combination of other industries, and so a temporary relaxation in the trade from the cause referred to may pass over unfelt.

The unfortunate explosion at the Hafod the week before last is a grievous business, as five of the men have died, leaving one survivor, and he is reported to be in a precarious state. The facts and incidents of the circumstance will be enquired into in the usual way before the Coroner and his jury. It may, however, be mentioned in passing that in cases of this sort the direct cause which gave rise to the accident is shrouded in mystery, owing to the parties who could furnish the required evidence falling victims themselves in the general destruction which takes place, but in the present instance it is alleged that the man in charge of the piece of work where the explosion happened had taken off the gauze of his lamp, and was working with a naked light, when it was prohibitory for him to do so. The mishap has made something like a panic with some people, because the Hafod is one of the largest collieries in the district, employing from 600 to 700 men underground, and is considered a well-regulated works.

There is a rumour that the services of a local lawyer have been secured to act for the representatives of the deceased in all their cases; but the Hafod Company have doubtless got their hands full, without being driven to defend themselves at law, without any breach. The proprietors are in quite as much distress of mind on account of these calamities as the warmest friends of the sufferers can be. But if what is asserted be true the case must end in enjoining on every workman to keep the lamp with which he is provided against fire-damp absolutely intact.

The People's Coal and Colliery Company have just completed the purchase of the Plas Benion Colliery, and it is announced that coal from their works will be sold in London for 23s. 6d. per ton, to shareholders of course. The basis of this company differs from most others, because they produce and sell the commodity to themselves, and thus there is introduced a feature which appears somewhat contrary to the full scope of that free trade which developed so effectively the resources of trade throughout the land. The ticklish peculiarity is this will the relationship of the producer remain the same to the consumer under all the vicissitudes to which coal mining is naturally liable?

REPORT FROM SCOTLAND.

Dec. 10.—The Warrant Market became decidedly firmer at the end of last week, and a good business was done up to 105s. 6d., which was the closing price on Friday. On Monday there was a good deal of animation, and numerous transactions took place from 106s. to 106s. 9d., closing lower at 105s. 6d. Yesterday the market opened quietly, and business was done down to 104s. 6d., from which it soon rallied, and a good business was done up to 105s. 6d., closing with sellers at that price, and buyers offering 105s. 3d. To-day the tone was firm during the forenoon, with business from 106s. to 106s. 3d., but it was rather weaker during the afternoon, closing sellers 105s. 9d., buyers 105s. 6d. The foreign demand is still quiet, but the briskness of the home trade and the returning ease in the money market have given a certain amount of strength to the market, and the under-noted quotations for makers' iron show a decided advance on this day last week:—

G. M. B., at Glasgow (deliverable alongside)	No. 1.	No. 3.
Gartsherrie ditto	107s. 6d.	107s. 6d.
Coltness ditto	107	107
Summerlee ditto	107	107
Carnbroe ditto	107	107
Monkland ditto	107	107
Clyde ditto	107	107
Govan, at Broomielaw ditto	107	107
Langloan, at Glasgow ditto	107	107
Calder, at Port Dundas, ditto	107	107
Glengarnock, at Ardrossan ditto	107	107
Eglinton ditto	107	107
Dalmellington ditto	107	107
Carron, at Grangemouth, selected, ditto	107	107
Shotts, at Leith ditto	107	107
Kinnell, at Boness ditto	107	107
Bar iron	213	0
Nail rods	13	0

SHIPMENTS.

Week ending Dec. 7, 1873	Tons 12,911
Week ending Dec. 6, 1873	9,138
Decrease	3,773
Total decrease since Dec. 25, 1872	222,066
Imports of Middlesbrough pig-iron into Grangemouth	
Week ending Dec. 6, 1873	Tons 1,960
Week ending Dec. 7, 1872	350
Increase	1,610
Total increase for 1873	25,105

The Malleable Iron Trade is marked by the uncertainty which prevails when prices are subject to fluctuations; and we hear that the whole of the hands at B'choairn have been notified that their engagements may be terminated on a day's notice. The object of this notification is to leave the company at liberty to deal with the wages question unencumbered with engagements if any difficulty should occur at the close of the year. A number of the works are working from hand-to-mouth, and smaller prices are being taken for limited orders. Machinists, brassfounders, and copper workers are well employed. The shipments from the Clyde are diversified and small, but we notice the shipment of parts of a steamship (complete) to Bremen from Greenock of the value of 85,000l.

The shipments of coals from the Scotch ports for the week just ended amounted to 38,738 tons, against 34,596 tons in the same week of 1872. Although these figures show an increase on the week over that of last year, still prices are weaker, and a decline of fully 2s. a ton is readily submitted to for orders of a few hundred tons. The miners, however, are doing the best they can to prevent the accumulation of stocks; and at a mass meeting, held at Motherwell, the miners' agent, Mr. Browne, gave them this advice—which was accepted and acted upon—that they should—

"Work eight hours a day, and six days a week, even sacrifice your monthly idle day if that is required to supply the demand, and you can get plenty of wagons, but on no account bring. If no wagons are forward when you go to work in the morning, turn on your heel and go home to bed."

To their beds they too frequently go, as there is a scarcity of wagons from the causes formerly noticed; but as Mr. Smithells, the general manager of the Caledonian Railway, has issued the following circular to coalmasters, traders, and others, a change must take place speedily:—

"I annex copies of the circulars which were addressed to coalmasters, traders, and others upon this line in December, 1868; October, 1870; June, 1871; June, 1872; and September, 1872, and have to express my regret that, notwithstanding these frequent appeals, the company's mineral wagons have been, and still are, detained a most unreasonable time under load, as 'bings,' or 'stores,' at the stations and depots to which they are consigned, thus depriving the company of the use of

them and greatly inconveniencing the traffic of the railway, and also causing complaints from the public, which would be obviated were wagons used in the manner the company have a right to expect. A large sum of money is now owing to the company for demurrage, which the traders who have incurred it decline to pay, and the directors have instructed the company's solicitor to proceed against the parties for the recovery thereof. They have also decided not to supply empty wagons to traders who at the time of applying for them are "binging," or "storing" coal in the company's wagons, or otherwise improperly detaining wagons under load, and that they will withhold the supply of empty wagons to such parties so long as other wagons are improperly kept under load by them. The wagons upon the railway at the present time are sufficient for the requirements of the coalmasters and traders if only used as they ought to be, and as they were always intended to be, for the conveyance of their traffic upon the railway, and the directors are determined that henceforth they shall only be so used. The company cannot suffer more from adopting the measures now decided upon, to ensure wagons being properly used, than they have hitherto suffered from the unjust detention of them under load. In future, therefore, traders desiring to "bing," or "store," coal in wagons must provide their own for that purpose, but on the understanding that they must be kept upon their own sidings until the traffic they contain is required by the consignees, and that they are not to stand upon the company's sidings, those sidings being intended for the dispatch of traffic, and not for the storing of wagons under load for an indefinite time. I have further to intimate that from this date demurrage at the rate of 3s. per wagon per day will be charged on wagons belonging to this company remaining under load beyond two days, and standing room at the rate of 1s. per wagon per day, on traders' wagons remaining under load upon the company's sidings beyond two days, and that these charges will be strictly enforced.

DUTCH PEAT FUEL.—In an interesting paper on this subject, read before the Edinburgh Geological Society by Mr. Ralph Richardson, the secretary, the writer referred to the extensive use made of peat fuel in Holland, which he had visited last summer. He stated that far greater supplies of peat existed in the United Kingdom than in the Netherlands, and it would be well, he said, especially during the present coal famine, if these supplies were turned to peat. The writer also brought under the notice of the meeting the peat coal made by the Peat Coal Charcoal Company, which has obtained the right to manufacture this coal on Mr. Challenor's Brugh's system. The fires in the room were lighted with this coal, which Mr. Rhodes said could be sold in London at 20s. a ton. For domestic use it had advantages over ordinary coal in respect of want of smoke, the length of time which it kept burning, and otherwise. Mr. Dudgeon Cargen referred to the system of manufacturing the peat fuel by Clayton's patent, and several others took part in the discussion.

LAUNCH OF A PACIFIC MAIL STEAMER.—The largest merchant vessel ever built on the Clyde, and the second largest in the country, being next to the Great Eastern, was launched on Saturday afternoon from the building yard of Messrs. Elder and Co., and was named the Iberia. The vessel, which is a screw steamer of 4320 tons gross, is constructed for the Pacific Steam Navigation Company. Her engines will be 450-horse power nominal. The vessel will be barque rigged, and will have iron masts, and for the convenience in the loading and discharging of cargo five powerful steam-winchies have been fitted up. She is also fitted with steam steering-gear and steam-windlass. The ship is divided into eight water-tight compartments, and has eight boats, one of which is a steam-launch. When finished, she will be fitted up in a very handsome and elegant manner, having accommodation for 140 first-class, 50 second class, and 300 third class passengers. Extensive accommodation is also provided for the officers and crew, 120 in number.

TRADE OF THE TYNE AND WEAR.

Dec. 11.—The general trade only of this district has been flat of late; it is, however, remarkable that the Steam Coal Trade continues very buoyant; it has been a fine season for exporting, and an excellent demand continues for this class of coal. All the collieries about Blyth are in full work. House, gas, and manufacturing coals are getting more plentiful, and at many works stocks are accumulating; in West Durham it is not at all uncommon to find a heap of coals containing a few thousand tons; it must, however, be noticed that this is owing in some cases to a deficiency in rolling stock, the vast expansion of the iron trade of the district, and consequent increase in the coal and coke trades, having taxed the resources of the railway companies to the utmost.

The demand for Coke continues good, and prices have not fallen much. First-class coke, however, can be bought for 30s. per ton, and inferior sorts at 27s. per ton. The South Durham coke is largely consumed at Middlesbrough, and is in high repute in Cumberland, Cleveland is now consuming upwards of 50,000 tons per week of this coke for ironmaking, and Cumberland and Lancashire consume upwards of 15,000 tons per week.

At Middlesbrough, on Tuesday, the demand for Pig-Iron generally has somewhat improved, and prices ruled rather firmer. The highest price touched by No. 1 was 95s., and No. 4 is now 80s. The stock has increased last month to the extent of 4000 tons. The demand for rails and all kinds of finished iron continues very flat and entirely devoid of animation, and prices are consequently drooping. A large amount of pig-iron continues to be sent to Scotland. From the Cleveland Ironmasters' Association return it appears that at the end of November there were in blast 132 furnaces, only 7 furnaces being out of blast, and there are 19 furnaces now in course of erection. The make of pig-iron during the month was 170,512 tons, against 165,822 tons in November, 1872, showing an increase of 4690 tons in the make, the total stock of pig-iron held at that time being 63,392 tons, and as the make is enormous this stock is of little consequence. The Iron and Coal Trades in Cumberland have shown decided signs of weakness lately, and fears are expressed by many that the tide has turned. Coals are more plentiful, and, consequently, can be had in many cases on easier terms. The demand for iron has also been much weaker, and prices are drooping.

MINING INSTITUTE.—An ordinary meeting of the members of the Mining Institute was held in Newcastle, on Saturday, Mr. R. S. Newall in the chair. After some ordinary business had been transacted, Mr. J. B. Simpson read a paper on "Natural Gas in the Coal Mines of Belgium," translated from the French of MM. Cornet and Brian. The Secretary also read a paper on "Raising Coal from Great Depths by means of Atmospheric Pressure," on the system of Mons. Z. Planche, translated from the French.

SALE OF THE TRIMDON COLLIERY.—The proprietor of the extensive colliery at Trimdon, South Durham, has just disposed of it to a London company which has recently been established, with a capital of 105,000l.; the property to be transferred next May.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Dec. 11.—The Iron Trade of South Staffordshire remains in the same unsettled and unsatisfactory condition as described a week ago. The uncertainty as to the future course of prices restricts the operations of buyers, and makers are cautious about booking orders until the rate of wages for the next quarter is definitively settled. At a meeting of the Conciliation Court to be held to-morrow (Friday) afternoon a proposal will be submitted, fixing the wages rate on the basis of 12s. 6d. per ton for puddling, being a reduction on the present scale of 9d. per ton. This rate, it is proposed, shall be in force for the first three months of next year, and that afterwards the rate shall be 1s. per 11. per ton on the selling price of iron in the South Staffordshire and the North of England districts; 8s. 6d. per ton to be the minimum, and 12s. 6d. the maximum rate. The result of the deliberation will probably not be made known in time for publication in this week's Journal, but little anxiety is felt as to the matter being amicably arranged. Quotations for iron, although nominally the same, are practically much easier, second qualities both of pig and finished iron being pressed for sale. All-mine (hot-blast) pig stands at 7l. 10s.; part-mine ditto, 6l. to 6l. 5s.; and cinder, 4l. 10s. to 4l. 15s. per ton. Hematite and other North Country pigs are offering in this district at 5s. to 10s. below the rates ruling three months ago. Finished iron remains on the basis of 14l. for marked bars, and 13l. for second-class ditto; but orders have been placed for common bars as low as 12l., and even slightly under that figure. Sheets (singles) range from 14l. to 15l. for ordinary, and in the usual proportion for lathens and doubles. In the quotations for galvanised roofing sheets the same irregularity prevails which has been for some time noticeable. The business doing just now in finished iron is of unimportant extent, and it is improbable that many orders will change hands before Quarter-Day.

Some interesting experiments with the Burleigh rock-drill were made on Saturday, at the limestone pits of Earl Dudley, in Castle Fields. The experiments, which were witnessed by Earl Dudley's agent (Mr. Fisher Smith) and others, were superintended by Mr. W. W. Cobb. A hole 24 in. deep was bored in a piece of limestone in 16 minutes, and another of the same depth in a piece of Rowley ragstone was completed in an equally short time.

The Coal Trade of South Staffordshire shows less tendency towards ease than was observable a fortnight ago, and it is now considered in many quarters improbable that the predicted reduction in price will take place before quarter-day. In certain cases coal of second quality is being offered at slightly reduced rates, but the reduction is not general, and best coal in all cases maintains its value on the standard last quoted. The diminished consumption caused by the

partial operation of the ironworks is estimated at 20,000 tons per week, but this is counterbalanced by a corresponding reduction in the output.

Shares in local coal and iron companies are quoted on the Birmingham Stock Exchange as under:—Sandwell Park Colliery, 150, buyers; Cannock and Huntington Colliery, 24; Chillington Iron, 74, sellers; John Bagnall and Sons, 104, sellers; Patent Nut and Bolt, 2 prem., buyers; Patent Shaft and Axle, 84 prem., sellers.

The miners in the South Staffordshire district are taking preliminary steps in the formation of a Court of Arbitration and Conciliation, similar to that established with so much success in the coal trade of the same district.

In North Staffordshire the quotations for finished iron remain upon the basis of 12l. 5s. for crown bars. The business doing just now is, however, of unimportant extent. Most of the finished ironworks are in partial operation. Some are running short time, and others have their puddling-furnaces laid off. It is not expected that there will be any change of importance in the condition of trade until the turn of the new year.

REPORT FROM CORNWALL.

Dec. 11.—The official announcement of a drop in the tin standard, which was foreboded in some quarters last week, has not yet been made; and, possibly, though things are very dull, we may be spared this infliction. There is not likely to be much doing in mining circles for the next week or two. We have arrived at a time of year when matters agricultural naturally attract the largest amount of notice, and when ploughing matches, cattle shows, and Christmas markets pretty well monopolise public attention. Several prominent country gentlemen have been presiding at these meetings recently, and mining has not been altogether forgotten, but with the exception of the confidence expressed that the mines rating question will be settled next session there is not much that calls for comment.

Dr. Le Neve Foster, the Government Inspector of Mines for Cornwall and Devon, took a very wise and useful step the other day. An "accident" recently happened at East Pool Mine, in which a lad was blinded for life by the explosion of a hole that had missed fire, and which he and another lad were "boring out." This is forbidden by the Act, and Dr. Foster took the opportunity of explaining to the men assembled at East Pool setting exactly what the provisions of the law were.

Attention has been called to the fact that there is still a want, in spite of the large returns, of labour in our mining districts. Week by week the Cornwall Minerals Railway, and the Devon and Cornwall line to Lifford, are advertising, almost imploring workmen to come and assist in making these lines. Certainty of employment, good wages, with lodgings provided, and good and cheap living, are among the attractions set forth. It seems marvellous, under such circumstances, that Cornishmen, whose services in their native mines will, perhaps, be required again before long, should export themselves either to the coal pits of Northumberland or across the ocean. It is the old story—those things which are most distant look most attractive, perhaps because the exaggerations of plausible stories are not so easily detected when they relate to far-off regions.

North Caradon has turned up again. On Tuesday, at the Manchester Assizes, the trial of Edwin Harvey Wadge on a charge of obtaining money under false pretences and of conspiracy, was resumed before Mr. Baron Pollock. The prisoner had been connected with the North Caradon mining venture, in connection with which it was stated that he had grossly swindled. One of the prisoner's confederates, Gibson by name, was tried a few years ago and sentenced to five years' penal servitude. Wadge had since kept out of the way, and on his return to London was apprehended. He was found guilty, and sentenced to five years' penal servitude.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Dec. 11.—At the lead mines at Eyam, Castleton, and the higher districts business goes on steadily, there being very little speculation going on. Some of the small concerns worked by miners realise very little more than ordinary wages. There is decidedly less activity at the collieries in both North and South Derbyshire, but the business doing with London is not so good as is usual towards the close of the year, so that prices have come down considerably. A less tonnage than usual has gone from Clay Cross of late, as well as from other collieries. The trade around Ekeington continues very fair, and an average quantity of coal is being raised at the Renishaw Colliery, which has just changed hands. On the Erewash Valley line business is moderately good. The pits at Langley Mill, Codnor Park, Shipley, and Pilley are doing very well. In some of those places there has been a discussion as to the desirability of carrying out the sub-section of the 51st clause of the Mines Regulation Act, which gives power to the workmen in any coal mine to appoint two of their number "to inspect the mine at their own cost, and the persons so appointed shall be allowed once at least in every month to go to every part of the mine, and inspect the shafts, levels, working places, return air-ways, ventilating apparatus," &c. At some places this is being carried out, but at others such confidence is reported in the manager that the men have agreed not to take the power which the Legislature has given them. The Staveley Works are doing a very good trade in foundry material, whilst a large quantity of coal is being sent from the pits of the company to London, Birmingham, and the West of England. There is no decrease in the production of pig-iron, despite the quietness of several places where the Derbyshire pig is largely used. The foundries are doing very well, there being a good demand for pipes, girders, plates, and rails, as well as for stoves and grates. At Dronfield the Messrs. Lucas continue busy on malleable castings and in steel spades and shovels for which the firm has long been noted. At their collieries, however, there has been some disagreement relating to prices, but it is in a fair way of being settled. At other collieries also the weights question has cropped up, the men, since joining the Miners' Association, considering that they are backed by a power which renders resistance on the part of the masters altogether futile. Messrs. Wilson and Campbell are turning out large quantities of Bessemer, and rolling it into rails.

There has not been much alteration in the Sheffield trades. The cutlery branches have slightly improved, but still there is nothing like activity with respect to them. The rail and plate mills are kept fairly going. The Bessemer works are doing fairly. Makers of malleable castings are doing very well, the vast establishment at Kelham being well supplied with orders, whilst the casting and machine works at Meadow Hall are also doing very well. The Coal Trade is very quiet, and it is evident that if the men continue at work prices must come down considerably, seeing that many colliery proprietors have as much as ever they can do to keep their men fully employed, and to avoid large accumulations of coal on the pit hills, whilst others are actually obliged to have recourse to short time. Our decreasing exports, owing to some of our formerly best customers, like Germany, Russia, and British India, opening out their own vast mineral resources, all point to the unmistakable fact that the time is fast approaching when we shall have more coal than we require, and when not only prices but wages will have to come down considerably. We shall then also see the collapse of many of those collieries comparatively insignificant, but which have sold for five or six times their actual value. Strenuous efforts are just now being made to sell small concerns, and every "dodge" is tried by the way to inveigle customers into the spider's parlour, where the web is so deftly spun to tinkle capitalists, large and small, to become shareholders in limited concerns. One company has just issued a most inviting prospectus, with a very peculiar bait. It states that the company have now agreed for the purchase of "the justly celebrated Newhill Silkestone Main Colliery." Justly celebrated, indeed! What for? But why the "Silkestone Main"? for that seam is not worked at Newhill, but the Wath Wath seam, 4ft. thick, whilst the Silkestone seam is actually 500 yards below it. In South Yorkshire, it is needless to say, the little piece is well known, but intending shareholders ought not to be deluded into believing that they are about to have an interest in a Silkestone Colliery. Everybody knows that the Silkestone coal deservedly has a first-class character for house and gas purposes, hence the specious and deceiving title. It is true that the board of directors consists of two lieutenant-colonels and a very reverend canon, but we exonerate them and the other directors from all knowledge of or participation in the craftily-devised juggle. Another matter which has greatly exercised those engaged in mining in South Yorkshire is the announcement of the name of a new colliery in the Barnsley district, which is advertised in the London daily papers as being now able to supply coal to all parts of the metropolis—"The Thornton Dale Collieries," near Barnsley, supply their coals direct to private consumers. London prices. Malton Field coal, 24s., and Barnsley seam, 26s. All orders to be directed to the collieries at Barnsley. Having made anxious enquiries as to the locality of the Thornton Collieries, I have been unable to discover it, and colliery proprietors and managers are in the same fix. The name is not to be found in Hunt's List, and whatever business has been done during the last month it has certainly not been done by rail, for in Scott's list of collieries sending coal to the metropolis no Thornton or Thornton Dale Collieries is to be found. However, any information on the subject sent to your correspondent will be acknowledged. It is possible that such a colliery is in existence, but it certainly is strange that no persons acquainted with the district know anything about it. How the proprietors manage to be

able to sell from 6s. to 7s. per ton less than other proprietors is another mystery, unless from a pure spirit of philanthropy, and to show that profit is not their object.

REPORT FROM MONMOUTH AND SOUTH WALES.

Dec. 11.—The Iron Trade still remains in much about the same state as for some time past, so far as actual business is concerned; but the improved feeling noticed a week ago still pervades the market, and manufacturers are looking forward to an early revival in the trade. The probability is, however, that the end of the year being so near there will be no material change in the state of things this side of New Year's Day; but as the new year opens it is expected that the Finished Iron Trade will gradually recover its wonted activity. That buyers have orders to give out there does not appear to be any doubt, but they still seem to hold aloof from transactions as much as possible, with the hope of being able to purchase at lower prices. This disposition is indicated by the fact that wherever makers will make concessions purchasers are immediately found to respond by entering into transactions. It must be repeated, however, that it is impossible that prices can be lowered to any extent at any time unless wages and the cost of pig and fuel are reduced considerably. It is not a little discouraging to see what small quantities of the railway iron manufactured in this district have been forwarded to the United States of America, month after month, during the year now ending. And what is yet more discouraging is that there is little probability at present that the year 1874 will be any better in this respect. There appears to be a strong feeling growing up on the west side of the Atlantic against the importation of English or Welsh finished iron, and American makers will lose no opportunity to increase that feeling. So it is to be apprehended that America will never again be so important a stay to the rail trade of South Wales as she has been. Fortunately, Russia is again a large purchaser in this district, and it is likely that as soon as the winter season is over there will be some extensive orders for steel and iron rails to execute on Russian account.

At the Landore Steelworks, which establishment has, perhaps, been the most actively employed of any in the district during the last six months, things are now beginning to "turn up rough." It is not, however, through a lack of orders, but owing to a dispute which has arisen between the masters and the men in regard to wages, and a good many of the men are on strike.

Happily at last there appears to be a little improvement in the Tin-plate Trade, and makers are preparing for a more active trade next year than they have experienced this year.

The Coal Trade continues to be the most active of the staple trades of this district. For steam qualities a brisk enquiry is kept up on account of the foreign markets, and prices are maintained. To this trade undoubtedly the prosperity of the district is mainly owing. The colliers continue to work with appreciable regularity, and the output being large proprietors are enabled to carry on a very extensive business. The prospects for the new year are good. The enquiry for house coals is increasing with the severity of the weather.

WEST ESKDALE LEE.—This mine continues to improve as the lode becomes more developed, and good ore ground is being laid open, which can be stoped away by-and-by at a great profit. At the eastern mine driving east and west by the side of the lode in the 21 ft. level has been pushed on. From present appearances the lode will turn out richer than when last reported on (60l. per fm.) when it is next taken down. The levels above are full of ore, but bands are short for the moment. At the western mine dressing has been going on throughout the week, the slight breakage to the machinery reported last week having been repaired in 24 hours. All the various points are looking the same as usual, and producing their customary quantities of ore. The weather continues fine and open for surface works.

NOVA SCOTIA LAND AND GOLD-CRUSHING AND AMALGAMATING COMPANY.—At the meeting on Thursday an adjournment was agreed to, there not being sufficient shareholders present to form a quorum.

MESSRS. VALENTINE & CO., 17 AND 18, CORNHILL, E.C., BANKERS, BROKERS, AND FINANCIAL AGENTS. FOREIGN EXCHANGE AND BILLION OFFICE, 173, FENCHURCH STREET, E.C.
Sales of Stocks and Shares, by Public Auction, every Tuesday, at the Mart, Tokenhouse-yard, E.C.

MESSRS. CAMERON AND CO., FINANCIAL AGENTS AND SHARE BROKERS, BRIDGE STREET CHAMBERS, CHESTER.

MR. T. L. COTTINGHAM OFFERS TO CAPITALISTS:—TWO GOOD WELL-FITTED GOING COLLIERIES. ONE SILVER-LEAD SET, proved very rich. ONE LEAD ditto. ONE IRON ditto.
And a PROPRIETOR'S INTEREST IN A RICH GOLD SETT.
FOR SALE—A CAPITAL PERCUSSION TABLE, in first rate condition.
Mold, Dec. 1, 1873.

MESSRS. GROSVENOR AND CO., SHAREBROKERS, 28, PORTLAND STREET, MANCHESTER, beg to inform their clients and the public in general that they have for sale a few shares in each of several most promising Progressive Mines, which they fearlessly assert will shortly return to investors enormous profits on a small outlay and at a nominal risk.

MR. CHARLES F. COLLOM, MINING ENGINEER, INSPECTOR OF MINES, &c. TAVISTOCK. MANAGEMENT OF THE SOUTH DEVON FIRE-CLAY COMPANY. Patentee of COLLOM'S PATENT REVOLVING FRAME FOR DRESSING TIN, AMALGAMATING GOLD, &c. INVESTMENTS IN MINES ARRANGED FOR CAPITALISTS.

GRIFFITHS'S GUIDE TO THE IRON TRADE OF GREAT BRITAIN is now published, and may be obtained from the Publishers, GRIFFITHS AND CO., 133, and 84, CANNON STREET, where a Post Office Order may be sent, which will bring the book by return of post. Price One Guinea. Cheques and Post Office Orders to be made payable to H. GRIFFITHS, 84, Cannon-street.

The wholesale agents are Messrs. SIMPKIN, MARSHALL, and CO., Paternoster-row, London, to whom all booksellers will be good enough to apply. All persons connected with the Trade may, nevertheless, send a remittance to the Publishers, and will obtain the book direct through the next post.

The Guide contains the names and addresses of all Ironmasters, Ironfounders, Tin-plate Makers, Bessemer Converters, and Collieries in the United Kingdom. The correct addresses of all Iron Merchants, Buyers, and Shippers of Iron in London.

A comprehensive Review of the Iron Trade for last year. Forty-four beautiful engravings of Ironworks and Foundries, including five of Earl Granville's, five of the Earl of Dudley's, three of W. Barrow and Sons, Bloomfield (B.B.H.), the Barrow Steel Company's Works, the Hyde Ironworks, Robert Heath's Morton Works, and W. Millington and Son's, Summer Hill Works, in Staffordshire, and others. Also voluminous statistics of coal and iron, including the output of coal and iron at the Collieries and Works for 1873.

The Guide likewise contains a list of all the Blast Furnaces in the United Kingdom which are in work and those idle.

The same with regard to all Puddling Furnaces.

In the Press, 8vo., price 6s.
REVIEW OF BRITISH AND FOREIGN MINES, FOREIGN BONDS, RAILWAYS, JOINT STOCK BANKS, MISCELLANEOUS.
By the Author of the "Science of Investments."
Early application is requested in order to secure the FIRST EDITION.
Messrs. HARRISON AND CO., FALCON COURT, TEMPLE BAR.

LEAD ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Dec. 1.	Van Consoles	50	£13 10 6	Burby Port Smelting Co.
8.	Lisburne; E. Logyias	20	13 17 6	Weston, Bush, and Co.
—	Gloglach	20	15 0 0	Sheldon, Bush, and Co.
—	East Darren	50	19 2 6	Weston, Son, and Co.
—	Cwmystwith	18	14 0 6	ditto
11.	Talargoch	60	13 13 0	Walker, Parker, and Co.
—	ditto	150	15 7 6	ditto
—	North Hendre	20	15 0 0	Adam Eytton.
—	ditto	4	20 0 0	Walker, Parker, and Co.
—	Lady Constance	9	10 10 0	ditto
—	West Prince Patrick	6	14 15 0	ditto
12.	Tankerville	75	15 2 6	Pontesford Company.

BLACK TIN.				
Date.	Mines.	Tons c. q. lb.	Price p. ton.	Amount.
Nov. 25.	Boscawell	4 0 1 5	£52 5 0	£210 18 6—Bolitho.
—	Downs	4 7 2 23	63 15 0	279 11 0—ditto
26.	So. Condurrow	20 15 2 13	67 17 6	1411 0 0—ditto
27.	Pedin-andrea	9 12 3 25	69 2 6	638 11 5—
28.	So. Condurrow	21 0 1 26	67 17 6	1427 0 3—Williams, &c.
Dec. 6.	Boscawell	5 14 1 33	63 5 0	638 15 0—Bolitho.
—	Downs	4 7 2 4	63 10 0	14 11 0—Michell.
—	ditto	0 6 2 28	64 10 0	31 13 7—ditto
10.	Furze Hill	3 5 1	69 0 0	225 6 0—

TO COAL AND IRON MASTERS, CAPITALISTS, AND OTHERS.
SALE OF FREEHOLD PROPERTY. known as the

IRELAND GREEN COLLIERY,

SITUATED AT WEST BROMWICH, in the county of STAFFORD.

Messrs. JOSEPH COCKEY AND SON have received instructions from the Trustees of the late William Ison, Esq., deceased, to SELL BY AUCTION, at the Hen and Chickens Hotel, Birmingham, on Thursday, the 19th day of December next, at half-past Four O'clock in the afternoon, in one lot, subject to conditions then and there to be produced—the above-mentioned highly valuable FREEHOLD MINING ESTATE, comprising a commodious RESIDENCE and Premises, known as the "Oak Cottage," three small DWELLING HOUSES and Gardens, and eight Acres of LAND, containing altogether 264. 18. 239. or thereabouts, of Surface Land, producing a rental of £126 16s. per annum, together with the MINES and MINERALS under the same, and under Lands belonging to the Trustees of Brick-kiln Land Dole, the Trustees of the late J. E. Piercy, Esq., and others, and under half of Oak Lane, Oak Road, Gads Lane, and Albion Road, to which the Property has extensive frontages, the total Mineral area being 32½ acres, or thereabouts.

The property is eligibly situated in the immediate neighbourhood of extensive ironworks; it contains a considerable area of Thick coal and other mineral seams, and in the presence of the coal trade is a very desirable acquisition. The Thick coal in the western part of the estate has been partially gotten, but the ribs and pillars and other mineral seams (excepting a small part of the Heathen and Gubbin ironstone) have yet to work therein. In the eastern part, which is separated by a fault from the western portion, the mines are untouched, and it is believed that it contains about 15 acres of SOLID THICK or TEN-YARD COAL. The PLANT comprises two good STEAM ENGINES for winding and pumping, with a lift of 9½ in. pump-works in good order, on the Whyley and Cutlers End Colliery, belonging to Messrs. Tearley and Duce, which adjoins the Ireland Green Colliery, will almost entirely relieve it of water; the remainder may be easily worked by the pumping plant on the estate.

Plans and particulars, and other information, may be had of Messrs. PALMER, BAY, and BROUGHTON, solicitors, Paradise-street, Birmingham; of the auctioneers, Paradise-street, West Bromwich; at the Midland Counties Herald Office, Birmingham; and at the place of sale.

FOR SALE, the STRANTON IRON AND STEEL WORKS, situated at WEST HARTLEPOOL, in the county of DURHAM, now in FULL and PROFITABLE OPERATION. These well-known and VALUABLE FREEHOLD WORKS

adjoin the North-Eastern Railway at West Hartlepool, and the railway is laid down both within and without the works, is conveniently arranged, and both loading and unloading are cheaply effected. The works consist of a PUDDLING FORGE, with TWENTY-FIVE FURNACES, all of which are well arranged, substantially constructed, and in working condition, are capable of producing 250 tons of puddled iron per week over the entire year. There are two shingling lammers, by well-known makers, capable of shingling the iron from 20 furnaces. The forge train consists of three pairs of rolls, adapted for rolling bars for plates, angles, or rails. The mills consist of a 20 in. plate, calculated to produce 140 to 160 tons of finished plates per week, with excellent guillotine shears and other appliances, the workmanship throughout being very good, and the engines of especially first class workmanship. Also a rail mill, calculated to produce 150 to 200 tons of finished rail per week; and a small bar mill, with two furnaces, for the production of merrill iron, capable of making 100 to 120 tons of bar iron per week. The workshops and offices consist of a commodious foundry, fitting and lathe shops, stores, and offices, and a four horse stable and outbuildings.

The liquidators of the Stranton Iron and Steel Company (Limited) are prepared to receive offers for the purchase of the above works.

For full particulars, and cards to view, apply to the liquidators, at their office, 119, Cannon-street, London, E.C.; to Messrs. CAPE and HARRIS, 8, Old Jewry, London, E.C.; to FREDERICK HERBERT, Esq., solicitor, 28, Nicholas-lane, London, E.C.; or to the Manager of the Works, West Hartlepool, Durham. The plant, stock, and machinery on the works will be sold by valuation in the usual way.

INVITING TO CAPITALISTS.

TO BE SOLD, in DERBYSHIRE, a good going COLLIERY, now about 350 tons weekly. The output can be increased double or treble as soon as connection, established in about two months, with branch of Midland Railway. Price £250,000.

TO BE SOLD, an EXTENSIVE COLLIERY ROYALTY, about 600 acres, near BARNESLEY. Upwards of 12 seams of coal untouched, including Silkstone Main and Silkstone Four Feet. Price, £13,500 for the entire, or £4000 for one-third—later preferred.

Either properties are certain fortunes.
Apply to Mr. WATSON, 16, Fenwick-street, Liverpool.

CARMARTHENSHIRE.

TO BE SOLD, A VALUABLE LEAD SETT—Royalty, 1-20th.
Apply to "O. G.", Post Office, Aberystwith, South Wales.

RARE OPPORTUNITY FOR MAKING A FORTUNE.

TO BE SOLD, PART OR ENTIRE (former preferred) of a COLLIERY ROYALTY in NORTH WALES, bordering on the London and North-Western Railway, and close to a shipping port. There are several shafts partially sunk, some requiring to be sunk still deeper, but operations stopped for want of capital. There are four seams of good house and steam coal proved in an area upwards of 400 acres of surface. Holders will sell the entire, including the present plant (not sufficiently powerful for sinking further) for £4000, but would prefer taking a PARTNER, who would advance the necessary capital for half profits, which in the present state of the coal trade are almost fabulous.
Address, "Vulcan," care of Mr. Watson, 16, Fenwick-street, Liverpool.

FINE OPPORTUNITY FOR MAKING A FORTUNE.

TO BE SOLD, PART OR ENTIRE (former preferred) of a COLLIERY ROYALTY, of about 170 acres, in NORTH WALES. The pit is sunk 40 yards deep to the seam containing the best description of Canol. There are six other seams of good coal (the first being King Coal, only 14 yards under it) known to be beneath this seam. Its situation being half a mile from a railway station, and also admirably adapted for land sale, close to excellent roads, the working expenses, royalty, rent, and outlay small for a probable get in a few weeks of 400 tons daily at an almost fabulous profit, under the present undertaking one well worthy the immediate attention of capitalists, coal dealers, gas manufacturers, or colliery proprietors.
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VALUABLE BEDS OF COAL.

IMPORTANT TO COLLIERY OWNERS, COAL MERCHANTS, MANUFACTURERS, AND OTHERS.

TO BE LET, ON LEASE, THE LOW MOOR BLACK AND BETTER BEDS OF COAL, lying under about 40 acres of land, situated between BRADFORD and DEWSBURY, in the county of YORK.

The coal has been proved by workings in surrounding properties. It is of a quality suitable for domestic and engineering purposes, is clear of water, adjoins a good public road, and is within half a mile of a railway station.

The outlay necessary in order to get the coal will be comparatively small, and the undertaking cannot prove otherwise than a profitable one.
Further particulars can be obtained on a personal application to Messrs. SMITH and GOTTARD, Bermondsey, Bradford.

TAYLOR, JEFFERY, AND LITTLE, Solicitors, Bradford.

LEAD MINES IN THE COUNTIES OF DURHAM AND NORTHUMBERLAND.

TO BE LET, ON LEASE, with immediate possession, the HUNSTANTHORPE AND NEWBIGIN ROYALTIES the former about 3504 acres and the latter 200 acres, or thereabouts.

The Hunstanthorpe Royalty adjoins the celebrated W.B. Lead Mines, and has for many years yielded large quantities of lead ore, and much of the ground is undeveloped.

For particulars, apply to JOSEPH DODDS, Esq., M.P., No. 4, Spring-gardens, Charing-cross, London, S.W., and Stockton-on-Tees; or Mr. THOMAS J. BEWICK, C.E., No. 4, Queen-square, London, S.W., and Haydon Bridge, Northumberland.

TO MERCHANTS, STOCKBROKERS, AND OTHERS.

TO BE LET, in the best part of Bishopsgate-street, nearly opposite the National Provincial Bank and the Baltic, COMMODIOUS and WELL LIGHTED OFFICES, in ST. HELEN'S CHAMBERS, a large building now approaching completion.

For terms, apply to Messrs. FRANCES, Architects, Palmerston-buildings, 34, Old Broad-street, where plans may be seen.

TO BE SOLD.

BEAM ENGINE, 16½ inch cylinder, high pressure or condensing, in good working trim, with foundation stones, complete.

PORTABLE ENGINES, for SINKING, MINING, or GENERAL PURPOSES, from 10 to 30-horse power, IN STOCK, or in PROGRESS OF CONSTRUCTION.

Full particulars on application to—
BADGER AND SON,
ENGINEERS, ROTHERHAM.

FOR SALE (ready for delivery), a high-class 18-horse power PORTABLE STEAM ENGINE, with reversing gear, suitable for winding, pumping, &c.

Also, a 25-horse power, with or without PIT WINDING GEAR.

FOR SALE, SEVERAL SECONDHAND PORTABLES, with NEW MORTAR MILLS, 5 to 9 feet pans.

Also, combined VERTICAL ENGINES and MILLS for GRINDING SLAG SAND, &c.

BARROWS AND STEWART, ENGINEERS, BANBURY.

NEW PAIR 8-in. HORIZONTAL WINDING ENGINES.—

WHEATLEY KIRK AND PRICE, Manchester.

NEW PAIR 12½-in. HORIZONTAL WINDING ENGINES.—

WHEATLEY KIRK AND PRICE, Manchester.

NEW PAIR 14-in. HORIZONTAL WINDING ENGINES.—

WHEATLEY KIRK AND PRICE, Manchester.

NEW PAIR 16½-in. HORIZONTAL WINDING ENGINES.—

WHEATLEY KIRK AND PRICE, Manchester.

WHEATLEY KIRK AND PRICE, MANCHESTER.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the FORTESCUE TIN MINING COMPANY (LIMITED).—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE NAMED COMPANY by the Court, was on the 5th day of December instant, presented to the Vice-Warden of the Stannaries, by John Derry and James Derry, trading in co-partnership at 81, Austell, within the said Stannaries, as Merchants, under the style or firm of "John and James Derry," creditors of the said company, and that the said petition is directed to be heard before the Vice-Warden, at 3, Ondon-square, Brompton, London, on Monday, the 22nd day of December instant, at noon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners, their solicitors, or their agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., Secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioners, their solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 18th day of December inst., and notice thereof must, at the same time, be given to the petitioners, their solicitors, or their agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall
(Solicitors for the Petitioner).

GREGORY, ROWCLIFFES, AND RAWLE, of Bedford-row, London
(Agents of the said Solicitors).

Dated Truro, December 9th, 1873.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL KITTY (LELANT) MINING COMPANY.—The Registrar of this Court has appointed MONDAY, the 22nd day of December instant, at Eleven o'clock in the forenoon, at his office, in Truro, TO SETTLE THE LIST OF CONTRIBUTORIES of the ABOVE NAMED COMPANY, now made out and deposited at the said office. FREDERICK MARSHALL, Registrar.

Dated Registrar's Office, Truro, this 11th day of December, 1873.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the POLCREBO MINING COMPANY.—Notice is hereby given, that ALL CREDITORS of the ABOVE NAMED COMPANY are required, on or before the 10th day of January next, TO SEND IN their NAMES and ADDRESSES, and the AMOUNTS and PARTICULARS of their SEVERAL CLAIMS, to FREDERICK MARSHALL, Esq., the Registrar of the said Court at Truro.

FREDERICK MARSHALL, Registrar.
Dated Registrar's Office, Truro, this 11th day of December, 1873.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the POLCREBO MINING COMPANY.—By an Order made by His Honor, the Vice-Warden of the Stannaries, in the above matter, dated the 10th day of December instant, on the petition of John Banfield, of Liffacombe, within the Stannaries of Devon, Gentleman, a contributory of the said company, IT WAS ORDERED that the POLCREBO MINING COMPANY be WOUND-UP by this Court under the provisions of the Companies Act, 1862.

HODGE, HOCKIN, AND MARRACK, Truro
(Solicitors for the Petitioner).

Dated Truro, this 11th day of December, 1873.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the NEW HARTINGTON TIN MINING COMPANY (LIMITED).—ALL CREDITORS or CLAIMANTS of the ABOVE NAMED COMPANY who have not received notice from the Registrar of the said Court that their claims have been admitted, are hereby required to COME IN and PROVE their SEVERAL DEBTS or CLAIMS at the Registrar's Office, Truro, on Saturday, the 20th day of December inst., at Eleven o'clock in the forenoon, or in default thereof they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such proof. And for the purpose of such proof they are either to attend in person, or by their solicitors, or competent agents, or (unless such attendance be required by the Registrar's summons) they are to send affidavits of their several debts or claims to the Registrar of the Court at Truro, such affidavits being sworn either before some Commissioner of the said Court, or any Commissioner of one of the Superior Courts lawfully authorised to take and receive affidavits and affirmations.

FREDERICK MARSHALL, Registrar.
Dated Truro, the 11th day of December, 1873.

HAYLE, CORNWALL.

IMPORTANT SALE OF A VERY VALUABLE COPPER MINE.

The LEASEHOLD ESTATES, known as the MELLANEAR COPPER MINE, Situate in the parish of ST. ERTIL, HAYLE, in the county of Cornwall, held for terms, of which 15 to 25 years are unexpired, at an unusually low price, the fixed MACHINERY, together with PLANT and MATERIALS thereon, comprising an 80 in. cylinder PUMPING ENGINE, a 70 in. cylinder PUMPING ENGINE, a 24 in. rotary STEAM ENGINE, with steam capstan, an 18 in. rotary STEAM ENGINE, with steam capstan, &c., TWO 12 ton BOILERS, FIVE 10-ton BOILERS, 120 fms. 19-in. pumps, 80 fms. 20-in. pumps, two 60 ft. shears, with sheaves, 30 ft. water-wheel, with 2 ft. breast and crusher, complete, 150 fms. 14 in. capstan rope, 2½ tons wire rope, and all necessary pitwork, &c.,

WILL BE SOLD, BY AUCTION, BY

Messrs. WILKINSON AND HORNE, at the Auction Mart, Tokenhouse-yard, London, E.C., on Monday, December 22, at One in the afternoon precisely. The mine is now being worked, and its reserves of ore have been estimated to be worth £30,000, and it presents an unusual opportunity to a capitalist or company for acquiring a valuable productive and profitable mining property.

Particulars and conditions may be had of H. WILSON, Esq., the Liquidator, Bartholomew House, Bartholomew-lane, in the City of London; at the Royal Hotel, Truro; Tab's Hotel, Redruth; of Capt. MOYLE, at the mine, near Hayle; of A. PULBROOK, Esq., solicitor, 28, Threadneedle street, London; and of the Auctioneers, 7, Poultry, and 37, Bucklersbury, London, E.C.

NOTICE.

TIPTON GREEN COLLIERY, STAFFORDSHIRE.

POSTPONEMENT OF SALE.

THE SALE of the above IMPORTANT MINING ESTATE is POSTPONED from Thursday, the 11th day of December, 1873, to THURSDAY, the 22nd day of January, 1874, at the Chamber of Commerce, the Exchange, New-street, Birmingham, at Three o'clock in the afternoon for Four to the minute.

Plans and particulars may be obtained of Mr. JOHN HARVEY, the Agent, at the Tipton Green Colliery Offices, Tipton, who will show the property; from S. SPORFORTH, Esq., Solicitor, 31A, Great George-street, Westminster; Messrs. HARWARDS, SHEPHERD, and MILLS, Solicitors, Stourbridge; Mr. E. SMALLMAN, Mine Agent, King's Hill, Wednesbury; or of—

Messrs. CHESSHIRE AND GIBSON, Auctioneers, Birmingham.

SOUTH STAFFORDSHIRE.

IMPORTANT SALE OF A VALUABLE MINING ESTATE, known as

TIPTON GREEN COLLIERY,

TIPTON, including a surface area of about 70 acres, and a mining area of nearly 100 acres, with the UNGOTTEN MINES of COAL, IRONSTONE, FIRE-CLAY, and LIMESTONE thereunder, and the valuable fixed COLLIERY PLANT, PUMPING and WINDING ENGINES, and MACHINERY; also a

LICENSED INN,

Known as "The Albion," and numerous COTTAGES and OTHER BUILDINGS erected upon the property.

Messrs. CHESSHIRE AND GIBSON have received instructions from the Trustees of the will of the late CHARLES ROBERTS, Esq., TO SELL, BY AUCTION (unless previously disposed of by Private Contract, of which due notice will be given), on Thursday, the 22nd day of January next, at the Exchange Rooms, Stephenson-place, New-street, Birmingham, at Three o'clock in the afternoon for Four o'clock to the minute, in One Lot, the above-mentioned VALUABLE COLLIERY, intersected by railways and canals; also VALUABLE BUILDING PROPERTIES, BUILDINGS and WHARF LAND, together with the WHOLE of the VALUABLE MACHINERY and PLANT belonging to the vendors, comprising—

THIRTEEN STEAM ENGINES of the combined power of 420-horse, with their winding gear; NINETEEN BOILERS, pit frames, pulleys and guides, rollers and posts, pit chains, ropes, and other plant; also a LICENSED PUBLIC HOUSE, known as "The Albion Inn," numerous COTTAGES, WAREHOUSES, stabling, and other BUILDINGS and LAND, producing a gross rental of £535 10s. 4d. per annum, exclusive of the important income derivable from royalties, to which it may be expected a very considerable increase will be made as soon as the Mines Drainage Act comes into full operation.

The Tipton Green Colliery is well situated for the transit of its minerals to all parts of the kingdom. It is intersected by the London and North-Western Railway (the Tipton Station of that railway being within its boundaries) by the upper and middle levels of the Birmingham Canal, and by the Walsall Canal, and there are several basins on the property connected with the said canals.

Plans and particulars may be obtained from Mr. JOHN HARVEY, the agent, at the Tipton Green Colliery offices, Tipton, who will show the property; from S. SPORFORTH, Esq., Solicitor, 31A, Great George-street, Westminster; Messrs. HARWARDS, SHEPHERD, and MILLS, Solicitors, Stourbridge; Mr. E. SMALLMAN, Mine Agent, King's Hill, Wednesbury; and from the Auctioneers—

Messrs. CHESSHIRE AND GIBSON, 93, New-street, Birmingham.

70-inch CORNISH PUMPING ENGINE.

FOR SALE, A FIRST-CLASS 70-inch. PUMPING ENGINE, 11 ft. stroke in cylinder and 10 ft. in shaft, with 2-12 ton BOILERS.

Apply to F. W. MICHELL and Co., East Carn Brea, Redruth, Cornwall.

TO COAL MASTERS, COLLIERY PROPRIETORS, AND OTHERS.

TO BE OFFERED FOR SALE, BY PUBLIC AUCTION (unless previously disposed of by private contract), in the early part of the ensuing year, the MINES and MINERALS, lying within and under a compact ESTATE, situate at IBSTOCK, in the county of LEICESTER, containing about 184 acres, and lying at a short distance from the Ibstock Colliery Powers of entry on a suitable portion of the surface of the estate, and other necessary rights of way for the development of the mines, will be granted therewith.

Further particulars will be published in due course, meanwhile any further information can be obtained on application to Messrs. SMITH and MAMMATT, or to Messrs. E. and T. FISHER, Solicitors, Ashby-de-la-Zouch.

FOR SALE, THE EXTENSIVE COPPER AND BLENDE

MINE OF A I N B A R B A R ,

NEAR BONA, ALGERIA.

This property is situated on the North Coast of Africa, only two miles from the sea, and about 20 miles from the town and port of Bona, Algeria, with which it is connected by a carriage road.

CONCESSION.

The concession comprises a tract of country over two miles in length, by half a mile in breadth, and was granted to the late proprietors in perpetuity, the only Government Royalty being an interest of 5 per cent. on the net profits, after a fair reduction in the same for interest on capital, depreciation of plant, and reservifund.

GEOLOGICAL CONDITIONS.

The two lodes for which the concession was obtained can be very easily traced from one end of the property to the other, a distance of two miles; they traverse the rock formation—Devonian schist, at almost right angles, and are intersected by dykes of a whitish-brown porphyry, or what is generally known to English miners as elvan courses, in three or four places, at no great distances from each other. Most of the geological features of this district are almost identical with those of the great copper-producing localities of West Cornwall; the schist here, however, lies on, or is next in order to the gneiss (which is visible to the north near the coast), whereas in Cornwall it is in juxtaposition with the granite.

LODES.

These, as before stated, traverse the rock, and are true or fissure lodes. Their direction being about east and west, and profiting by the natural facilities afforded by two valleys, the former proprietors made several adit levels from these valleys into the hill sides on the course of the lodes, the first being very near the outcrop, and the deepest, St. Barbe, about 70 metres below the highest point. The length of these levels is about 120 metres, so that the lodes have been explored to a depth of 70 metres from the surface, and for a length of 120 metres, or about 65 fms. Above and in advance of the Barbe level there is a great quantity of ore which can be worked on at once, and other adit levels can be made from the valleys to work these lodes to a much greater depth, without the assistance of machinery. The work hitherto done merely serves to prove what the mine is capable of doing when properly explored and worked. The lodes are generally from 3 to 5 ft. in width, but near the elvan courses before alluded to, they widen out, and contain large columns of ore. The average yield of all the ground opened in these lodes, as shown by the books of the late proprietors, is 2½ tons per fathom, or containing 10½ per cent. copper. This fact, taken in connection with another—viz., that the lode in the bottom level is richer than it was found to be in any of the shallow levels, and that there is only about one-tenth of the ground above adit excavated, proves conclusively that an enormous quantity of copper ore exists in this mine that can be easily and inexpensively raised.

ORE.

The ore occurs in rich dull-yellow "peacock" and "coated" sulphurets. The average yield of copper ore sold from this mine has been 10 per cent. metallic copper, obtained without dressing, but by means of a cheap dressing apparatus an average of 12 to 13 per cent. might easily be maintained.

CAPABILITIES OF THE MINE.

A careful examination of the books of the late proprietors shows that 6165 ton of copper ore, of an average of 10 per cent. metallic copper, was raised within the last 10 years in which the mine was worked, at an average cost of £2 18s. per ton, this sum includes all mine expenses, and carriage of ore to the port of shipment.

BLENDE.

Besides copper this mine is capable of yielding large quantities of blende, and in several places long courses are to be seen containing from 4 to 6 tons per fathom. The former proprietors neglected this source of revenue, and in working for copper by driving their levels, &c., they raised a large quantity of blende, and allowed it to accumulate on the surface of the mine. There is at least 2000 tons of this ore now on the mine heaps, which can be sent to Swansea for £1 15s. per ton. The great abundance of this ore renders the raising of it a very easy operation, and with the average price of spelter during the last year, and which is likely to continue, this ore will prove very valuable to the proprietors, as at least 2000 tons could be raised and shipped annually, at a cost of from £2 to £2 5s. per ton, which would realise £4 5s. to £4 10s. per ton, leaving a net profit of at least £2 per ton. This blende, which is of a dark brown colour, contains 48 per cent. metal, and is generally found pure, or associated with a little copper.

At a very moderate estimate the returns of copper ore from the mine may be placed at 2400 tons for the first year, and 3000 tons annually afterwards. The former proprietors raised and sent all their ore to Bona, at a cost of £2 18s. per ton; taking this as a basis, and add cost of dressing 5s. per ton, transit to Swansea, insurance, and expenses £1 per ton, and we have a cost of £4 3s. per ton at Swansea. Taking the selling price of ore giving 12 per cent. at 15s. per unit, which is considerably below the average of the last two years, this makes the value of the copper ore at Swansea equal to £9 per ton, from which deducting the cost price as above £4 3s., leaves a net profit of £4 17s. per ton. But reducing these figures to the lowest possible point, and putting the profit on the blende at only £1 10s., and the copper at £3 per ton, upon the first year's output of 2400 tons copper, a net profit would be realised as follows:—

2000 tons blende, at £1 10s. profit £2000

2400 tons copper, at £3 £7200 = £10,200

But leaving the blende as above at 2000 tons per annum and putting the copper after the first year at 3000 tons as estimated, at the low figures allowed as profits we should have:

2000 tons blende, at £1 10s. 0d. profit £2000

3000 tons copper, at £3 0s. 0d. £9000 = £12,000

Giving a net annual profit of £12,000, which under any and all circumstances could certainly be realised.

The producing capabilities of the mine are unquestionable, and the figures representing the cost of raising the ore are considerably in excess of the actual experience and results of the former working.

CARRIAGE OF ORE TO PORT.

In estimating the cost of raising and conveying the ore to the port, it is necessary to explain how the ore was formerly carried on, and how it may now be effected. As before stated, the mine is two miles (in a direct line) from the sea. A cart-road was constructed by the late owners from the mine to a small creek on the coast, distant about 16 miles from Bona; at this creek a storehouse and landing place were built; the ore was carted to this point and thence conveyed to Bona by lighters. This means of transport might still answer, but, as the little port is quite as good as many of the shipping ports on the Spanish coast, by paying a trifle more for freights, vessels could be brought round from Bona, and load their cargoes at this point, and so materially reduce the cost of transport. The price paid herebefore for carrying has been 9 francs per ton from the mine to the landing place, and 6 francs thence to Bona, altogether 15 francs, or about 12s. per ton. The high rate from the mine to the port is caused by the length of the road four miles, and the considerable hill which has to be passed. If a wire tramway upon the Hodgson principle, for which system of transport the ground is admirably adapted, were laid down, at a cost of about £1200, the cost of carriage to the port might be reduced from 9 francs to about 9d. per ton.

PLANT.

Upon the mine there is a good manager's house, well furnished, offices and furniture, store-houses, canteen, stables, and lodgings for about 100 miners and work-people, smiths' and joiners' shops, and other necessary buildings, all built of masonry in the most substantial manner, and covered with tiles. Also a large quantity of mining tools of all descriptions, smiths' and carpenters' tools, carts, tram wagons, with several hundred yards of railway in and out of the mine. At the shipping port there is a store-house and an agent's house, and about seven acres of good freehold ground belonging to the company. The property is almost entirely covered with cork oak trees, which furnish an abundant supply of timber for mining and other purposes at very cheap rates; the water supply for all purposes is unfailing, and of excellent quality.

It is necessary to state the reasons why a valuable property such as this has remained idle for nearly four years; it belonged to a few friends who formed a company "en participation," the peculiarity of which was that none of the partners could dispose of their share excepting to one or other of the members. M. La Baillie, who held more than one-half of the concession, died suddenly in 1869, leaving one daughter under age, and his affairs in the hands of trustees, who knew nothing of mining, and who, therefore, proposed to sell the property, which, all the other parties consenting, could only be done by public auction.

Whilst arrangements were being made between the several members of the company, the Franco-German war broke out, and from that time until the end of 1871 the property remained idle and matters unsettled; negotiations were then set on foot with an English firm for the purchase of the property, but nothing was finally settled until June,

RAILWAY CARRIAGE COMPANY (LIMITED).

ESTABLISHED 1847.

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MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, and EVERY DESCRIPTION OF IRONWORK.

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MANUFACTURE RAILWAY WAGONS OF EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.
EDMUND FOWLER, Sec.WAGON WORKS, —SMETHWICK, BIRMINGHAM.
** Loans received on Debenture; particulars on application.**WATTS, RICHARDS, AND CO.**
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Importers of every description of wood for colliery purposes.

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Which have been tried and found to answer the purpose, are MANUFACTURED BY

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OXFORD STREET, BIRMINGHAM.**ORE-DRESSING MACHINERY.**

SEPARATION TROMMELS, JIGGING MACHINES, —Continuous and automatic. CLASSIFIERS, SHAKING TABLES, BUDDLES, PERFORATED PLATES, —For Trommels, Jigging Sieves, and Stamps' Grates. SACH'S ROCK-DRILL, —As used at Altenberg, Commern, Saarbrück, and Muesen.

For particulars, apply to—

Messrs. KEMMER AND CO.

CLARENDON GROVE, DRUMOND STREET, N.W., LONDON.

THE PATENT SELF-ACTING MINERAL DRESSING MACHINE COMPANY (LIMITED).

T. CURRIE GREGORY, C.E., F.G.S.

OFFICES, —62, ST. VINCENT STREET, GLASGOW.

This company grant licenses, under their patents, for the use, singly or in combination, of the most approved machinery for dressing ores, comprising Stamps, Jiggers, Classifiers, and Buddles.

Mr. GEORGE GREEN, the company's engineer, will exhibit the machinery in full work, and enter into contracts for the erection of the whole, including his Patent Self-feeding and Classifying Process, which is indispensable for the effective working of Self-acting Jiggers.

He has completed arrangements at Aberystwith, whereby he is able to supply and erect all at the lowest possible cost.

The following testimonials will be satisfactory:—

FROM THE GREENSIDE MINE COMPANY, PATERDALE,
WESTMORELAND.Paterdale, near Penrith, October 2nd, 1872.
DEAR SIR,—The patent jiggers, which you have erected at Greenside Mine, are giving great satisfaction. The separation which they make is complete. Your arrangement for self-feeding and classifying is the main step towards effective working, and is well designed. The saving both in ore and labour will please everyone, and there is no doubt that the new system must supersede the old in all places where these advantages are desired.
GREENSIDE MINE COMPANY,
Mr. George Green, Aberystwith. (per T. TAYLOR.)FROM CAPT. HENRY TYACK, M.E., EAGLE BROOK MINE,
CARDIGANSHIRE.Eagle Brook Mine, December 25th, 1872.
SIR,—I have minutely inspected The Patent Self-acting Dressing Machinery you have erected at the Great Darren and Bodecoll Mines. I do not hesitate to say that it is by far the most perfect machinery for the purpose I ever saw. The self-acting arrangement is complete, no labour being required to obtain a clean product from the crusher, under the very finest granular particles, while the slimes are conveyed direct to the buddles without settling pits. The system must save at least two-thirds of the entire labour cost, and a considerable amount of ore, which would otherwise be lost, and will, most certainly, be adopted where these considerations are an object.
HENRY TYACK.
Mr. George Green, Mining Engineer, Aberystwith.**MESSERS. WATSON BROTHERS** return their most sincere thanks for the great patronage bestowed and confidence reposed in their firm for upwards of 30 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS, they are emboldened to offer, thus publicly, their best services to all connected with the mining interest.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

COLLIERIES, IRONWORKS, &c.

Among the great complaints of metallic miners of late, has been the high prices of Coal and Iron; thus while dividends in Copper and Tin Mines have been gradually declining, many Collieries and Ironworks have been paying 20, 30, and even 50 per cent.; and in consequence of this, Messrs. WATSON BROTHERS have had several enquiries from clients for prices and particulars of the best investments in both classes, and they are collecting information which they hope to publish from time to time, and will be glad if Secretaries and Managers will furnish them with the same kind of information that Pursuers and Secretaries of Metallic Mines have so freely done during the last 30 years. In the meantime they will be ready to deal, at Market prices, in any or all of them.

TREDINNICK AND CO.,
CONSULTING MINING ENGINEERS.MINES PAY WELL, yet require judgment in the selection.
Statistical data and reliable intelligence gratuitously rendered.
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Are Development and Reproduction,
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To its disciples first hand God evidence."

"LITERARY WORLD," Nov. 7, 1873.—We can award him credit for a thorough acquaintance with the subject upon which he writes, the result, evidently of most painstaking research, and for communicating that knowledge in concise, and, for the most part, well expressed phraseology. His manifest enthusiasm certainly deserves a reward.

"SAUNDERS'S NEWS LETTER," Oct. 23, 1873.—Great praise is due to the publisher of this book, for the manner in which it has been brought out, both the printing and paper are excellent, and the binding is extremely neat. The object is the advancement of popular knowledge of chemistry. We hope it may be successful.

Handsomely bound, extra bound boards, price 5s. free by post. Stamps or P.O.O. to J. C. SELLARS, Ferry-buildings, Birkenhead, or through any bookseller. Respectable booksellers supplied on precisely the railway bookstall terms, by paying the cost of carriage which they can deduct when paying the account.

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ROYAL EXCHANGE, MIDDLEBOROUGH.

The IRON AND COAL TRADES' REVIEW is extensively circulated amongst the Iron Producers, Manufacturers, and Consumers, Coalowners, &c., in all the iron and coal districts. It is, therefore, one of the leading organs for advertising every description of Iron Manufactures, Machinery, New Inventions, and all matters relating to the Iron, Coal, Hardware, Engineering, and Metal Trades in general. Offices of the Review: Middlesborough-on-Tees (Royal Exchange); London 11 and 12, Red Lion-court, Fleet street; Newcastle-on-Tyne (50, Grey-street).

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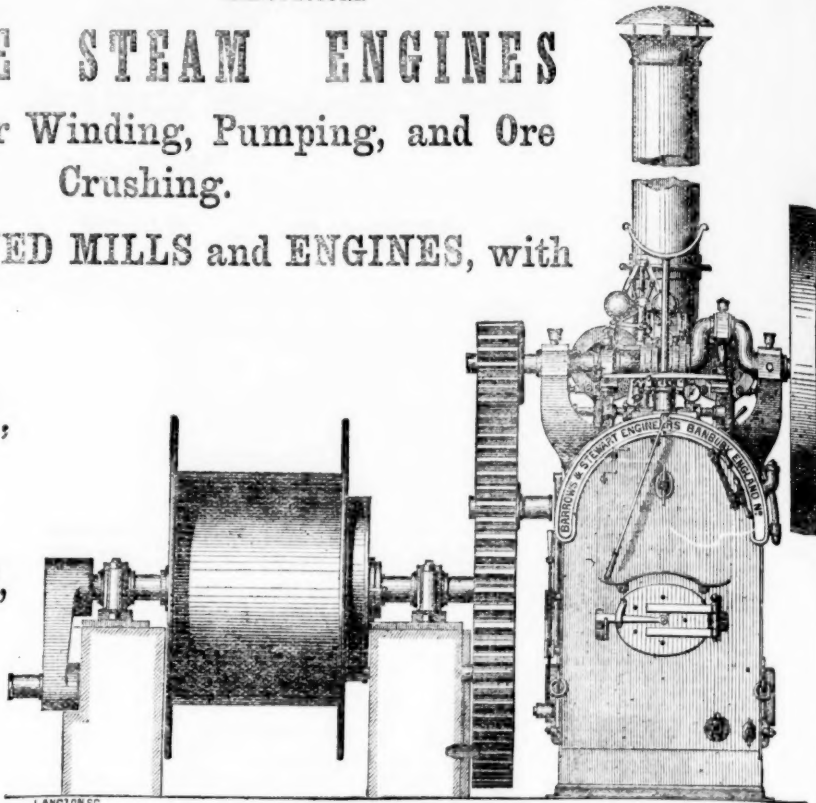
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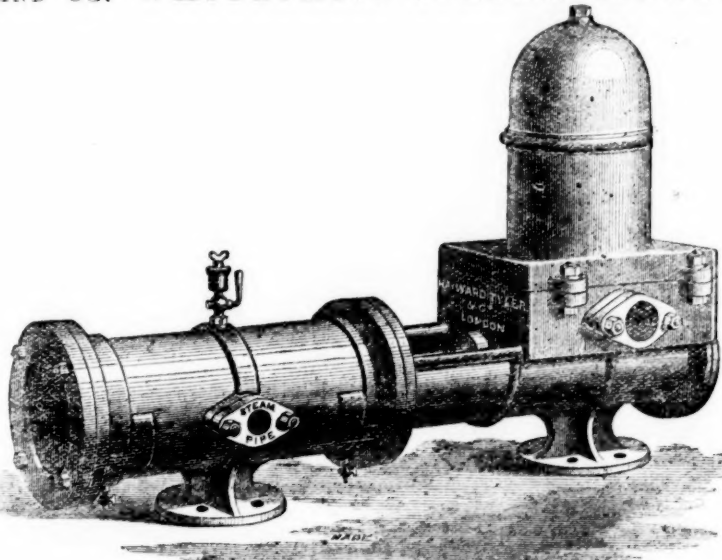
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The rapid and continued increase in the demand for these pumps for coal mines is the best testimonial to the remarkable success which has attended them, even under the most difficult circumstances.

"These pumps are now largely used in coal mines, where they have proved themselves extremely useful during the late floods. Their compactness and great power render them extremely useful."—*Chamber of Agriculture Journal*, Dec. 16, 1872.The *Times*, Dec. 10, 1869, speaks of them as "possessing many extraordinary advantages."For remarkable instances of their powers see *Times*, Dec. 14, 1872; *Globe*, Dec. 10, 1872; *Morning Advertiser*, Dec. 9, 1872; *Engineer*, Dec. 20, 1872, &c. See also descriptions in the *Colliery Guardian* and *Mining Journal*.

ESTABLISHED 1852.

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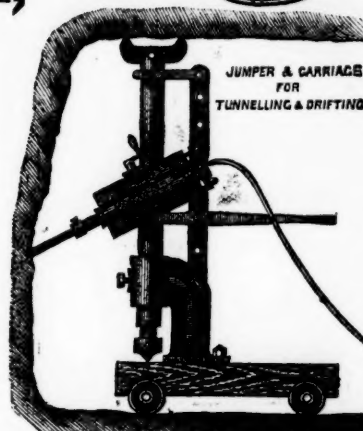
Both these Machines were awarded the FIRST-CLASS MEDAL at the Royal Cornwall Society's Exhibition, 1873.

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Rock Drills, Coal Cutters, Air Compressors, Winding and Pumping Machinery, Steam Boilers, Stone Breakers, Quartz Crushers, Stamps, &c.

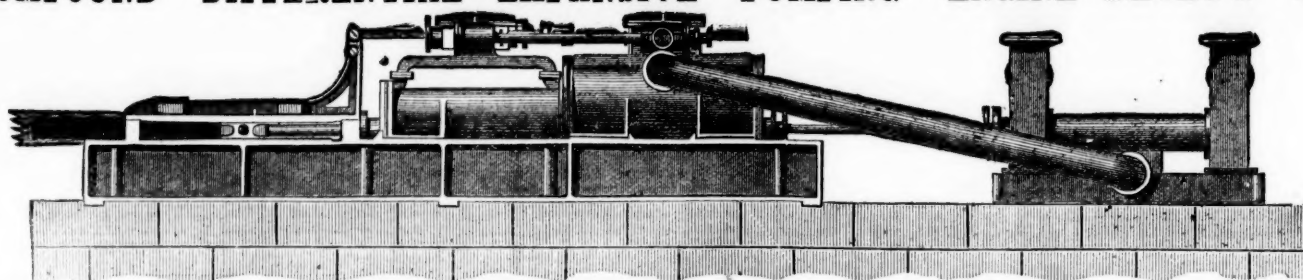
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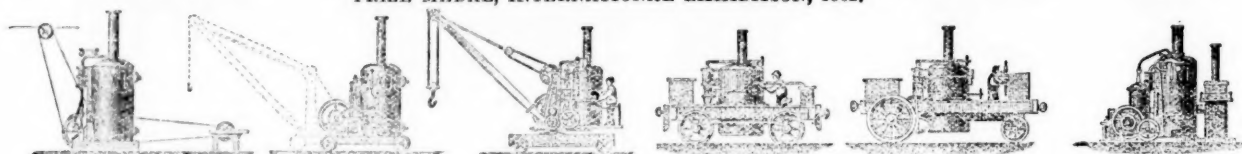
Also, Single-cylinder Condensing Differential PUMPING ENGINES; Steam Pumps, of various kinds; Hydraulic Pumps, for dip workings; Winding Engines; Compound Rotative Engines; the Separate Condenser; High and Low Pressure Steam Boilers, &c.

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STATIONARY ENGINE, From 1 to 30 horse power. No building required.

PORTABLE ENGINE, 1 to 30 horse power. With or without job.

STEAM CRANE, 30 cwt. to 20 tons. For wharf or rail.

CONTRACTORS' LOCOMOTIVE, 4 to 27 horse power. For steep inclines and quick curves.

TRACTION ENGINES, 6 to 27 horse power. Light and heavy.

SHIP'S ENGINES, Winding, cooking, and distilling. Passed by Government for half water.

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PATENTEE'S AND SOLE MANUFACTURERS,

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ENGINES OF EACH CLASS KEPT IN STOCK for SALE or HIRE, and ALL OUR MANUFACTURES GUARANTEED as to EFFICIENCY, MATERIAL, and WORKMANSHIP.

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